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UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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This Issue in Brief

Effect of war-contract cut-backs on selected plants.

In 20 of 80 plants surveyed by the Bureau of Labor Statistics, cut-backs in war contracts resulted in the reduction of the work force to less than half the former level. However, in almost half the establishments decreases amounted to less than 25 percent of peak employment. The total employment decline in the 53 plants significantly affected amounted to 91,224, an average reduction of 1,721 employees per plant. In approximately three-fifths of the plants, lay-offs accounted for more than 50 percent of the total reduction. Most adjustments were accomplished without significant changes in the workweek. At the majority of establishments no important grievances resulted from the reductions, and there was no noticeable effect upon the workers' morale and productivity. Most of the released men in all areas were placed in other jobs immediately or after periods of job hunting, but many women left the labor market or were unable to obtain other employment. In most areas, cut-backs did not cause serious continuing unemployment, and had no appreciable effect upon business activity. Page 463.

Labor conditions in Germany.

Germany's highly developed economy is based on both industry and agriculture. In 1933, when the country shifted from a democratic to a totalitarian regime, some 32,000,000 persons were gainfully occupied. Unemployment was greatest during 1932 but was gradually eliminated under the Nazis. Wartime employment was increased through total mobilization of manpower and the use of foreign workers and war prisoners. The free public employment exchanges of the Republic became the major agencies for the control of manpower during the war. The Nazis abolished collective bargaining and established officially fixed wage rates. Real hourly wage rates declined from an index of 109 in 1931 to 93 in 1941 while real hourly earnings rose from 102 to 105. All free labor unions were replaced by the Nazi Labor Front, and labor-relations agencies were abolished or transformed into instruments of the Nazi State. A comprehensive system of social insurance provided protection for sickness, old age, unemployment, and industrial injuries. Page 498.

Nonagricultural placements of veterans in 1944.

Discharged veterans to the number of 806,139 were placed in nonagricultural employments in 1944 by the U. S. Employment Service of the War Manpower Commission. Nearly half of them took unskilled jobs, and slightly over 130,000 went into skilled jobs. About 14,450 obtained professional and managerial positions. Page 547.

Wartime employment in tire-cord manufacture.

The number of wage earners in tire-cord and fabric mills increased in the last 2 months of 1944, reversing the downward trend in employment which the industry had experienced since early in 1943. The trend in employment in tire-cord mills has been similar to that in the cotton-goods industry as a whole, but the employment losses have been relatively smaller. This points to the possibility that slightly higher average hourly earnings and a longer workweek have been instrumental in the more successful recruitment and retention of workers in the tire-cord mills. Page 527.

Industrial injuries in 1944.

Preliminary estimates by the Bureau of Labor Statistics indicate that in 1944 about 2¼ million workers were injured while at work. The time loss involved in

these accidents is estimated at 222,944,000 employee-days—the equivalent of full-time annual employment of 145,000 workers. Page 549.

Work injuries to women in shipyards, 1943–44.

An analysis of injuries to men and women in nine shipyards, made by the Bureau of Labor Statistics, revealed a relatively higher rate of disabling injuries to women than to men. There was less difference between the sexes in the injury-frequency rates on work of a repetitive and routine character than on work involving climbing, lifting, and strenuous exertion. Women were found to take time off more frequently as a result of accident and to be away for longer periods than was the case among the men. Page 551.

Federal social security and related programs in 1943.

More than 772,000 persons were receiving retirement benefits under five major systems in the United States at the end of 1943. The average benefit per month ranged from $23 under the Federal old-age and survivors system to $86 for retired Federal employees. Total retirement payments in 1943 exceeded 400 million dollars. In addition, 377 million dollars was paid in workmen's compensation for industrial accidents and 81 millions for unemployment compensation. Page 561.

Wartime job opportunities for women household workers in Washington, D. C.

In the fall of 1944 the wages being offered to women household workers in Washington, D. C., and nearby Virginia and Maryland showed a very great increase over pre-war years, according to an analysis of 562 advertisements in the domestic-service columns of a local newspaper. In 86 offers wages ranged from $40 to $160 per month and averaged $92.25. In 323 offers the rates ran from $12 to $30 per week, the average being $20 or a median of $20.35. The latter figure was in strong contrast with the median earnings of white women ($9.35) and of Negro women ($8.85) reported in a somewhat comparable survey in 1940. Page 575

Average hourly earnings in the explosives industry, June 1944.

Straight-time average hourly earnings of workers in the explosives industry ranged from 92 cents in smokeless-powder plants to $1.08 in dynamite plants. General averages for the other two branches of the industry were $1.00 in black-powder plants and $1.01 in TNT and DNT plants. Detailed earnings data are given for the selected occupations in each of the four industry branches in an article on page 603. Working conditions are also discussed.

Union wages and hours in the printing trades, July 1, 1944.

Union printing-trades workers on July 1, 1944, had rates averaging $1.337 per hour. On newspapers the average day rate was $1.429 and the average night rate $1.574; for both groups combined the average was $1.505. Book and job workers' rates averaged $1.251. Page 618.

Changes in prices of gas and electricity in 1944.

In 1944 the cost of both electricity and gas continued the decline that has been under way for some years. During the year ending in December 1944, gas bills for 10.6 therms fell 1.4 percent and those for 30.6 therms 1.6 percent. For electricity the cost of 25 kwh and 100 kwh declined 1.0 and 0.9 percent, respectively. Page 645.

Current Statistics of Labor Interest in Selected Periods [1]

[Available in reprint form]

Item	Unit	1945: January	1944			1939: average for year
			December	November	January	
Employment						
Civilian labor force: Total (BC)	Thousands	50,960	51,250	52,210	51,430	[2] 54,230
Male	do	33,650	33,720	34,060	34,640	[2] 40,950
Female	do	17,310	17,530	18,150	16,790	[2] 13,280
Employed	do	50,120	50,570	51,530	50,350	[2] 46,930
Male	do	33,160	33,320	33,710	33,990	[2] 35,600
Female	do	16,960	17,250	17,820	16,360	[2] 11,330
Nonagricultural	do	43,430	43,480	43,390	43,750	[2] 37,430
Agricultural	do	6,690	7,090	8,140	6,600	[2] 9,500
Unemployed, total	do	840	680	680	1,080	[2] 7,300
Civilian employment in nonagricultural establishments: Total.[3]	do	37,852	38,811	38,340	38,965	30,353
Manufacturing	do	15,544	15,616	15,600	16,825	10,078
Mining	do	803	806	812	858	845
Construction [4]	do	584	590	629	764	1,753
Transportation and public utilities	do	3,739	3,770	3,771	3,664	2,912
Trade	do	7,012	7,617	7,299	6,919	6,618
Finance, service, and miscellaneous	do	4,274	4,292	4,315	4,128	4,160
Federal, State, and local government, excluding Federal force-account construction.	do	5,896	6,120	5,914	5,807	3,988
Military personnel	do	11,900	11,900	11,900	10,400	362
Wage-earner employment:						
Manufacturing	do	13,097	13,184	13,155	14,338	8,192
Bituminous-coal mining	do	338	338	340	370	371
Class I steam railroads, including salaried employees (ICC).	do	1,391	1,400	1,408	1,357	988
Hired farm workers (BAE)	do	1,434	2,048	2,522	1,580	[5] 1,626
Hours of labor						
Average hours per week of wage earners:						
Manufacturing	Hours		45.6	45.3	[5] 44.8	37.7
Bituminous-coal mining	do		43.1	42.6	[5] 44.7	27.1
Retail trade	do		39.8	39.4	[5] 39.4	43.0
Building construction (private)	do	39.0	39.4	39.7	38.5	32.4
Weekly earnings						
Average weekly earnings of wage earners:						
Manufacturing			$47.45	$46.86	[5] $44.58	$23.86
Bituminous-coal mining			$50.39	$49.66	[5] $52.72	$23.88
Retail trade			$26.41	$26.20	[5] $24.40	$21.17
Building construction (private)		$53.38	$53.48	$53.54	$49.83	$30.24
Hourly or daily earnings						
Average hourly earnings of wage earners:						
Manufacturing			$1.040	$1.035	[5] $0.995	$0.633
Bituminous-coal mining			$1.187	$1.173	[5] $1.188	$0.886
Retail trade			$0.728	$0.736	[5] $0.665	$0.536
Building construction (private)		$1.370	$1.359	$1.349	$1.295	$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry			$0.963	$0.962	[5] $0.927	$0.622
Employment by industry as of January 1939.			$0.886	$0.882	[5] $0.846	$0.622
Quarterly farm wage rate, per day without board (BAE).		$4.15			$3.50	[6] $1.53
Industrial injuries, labor turnover, and absences from work						
Industrial injuries in manufacturing, per million man-hours worked.			[7] 18.8	[8] 19.0	[9] 20.0	15.4
Labor turnover in manufacturing:						
Total separations, per 100 employees			5.7	6.0	[5] 6.6	(10)
Quits, per 100 employees			4.3	4.6	[5] 4.4	(10)
Lay-offs, per 100 employees			0.5	0.5	[5] 1.0	(10)
Total accessions, per 100 employees			5.1	6.1	[5] 5.2	(10)
Absence rates (workdays lost as percent of total scheduled):						
Manufacturing, selected industries			6.3	6.3	[5] 8.4	(10)
Bituminous-coal mining			14.9	12.5	[5] 11.4	(10)

See footnotes at end of table.

Current Statistics of Labor Interest in Selected Periods [1]—Continued

Item	Unit	1945: January	1944			1939: average or year
			December	November	January	
Strikes and lockouts [11]						
Strikes and lockouts beginning in month:						
Number		240	280	375	330	218
Number of workers involved	Thousands	44	85	200	113	98
All strikes and lockouts during month—man-days idle:						
Number	do	228	380	710	710	1,484
Percent of available working time		0.03	0.05	0.10	0.10	0.28
Cost of living						
Cost-of-living index (wage earners in large cities): All items.[12]	1935–39=100	127.1	127.0	126.6	124.2	99.4
Food	1935–39=100	137.3	137.4	136.5	136.1	95.2
Clothing	1935–39=100	143.0	142.8	142.1	134.7	100.5
Rent	1935–39=100		108.3		108.1	104.3
Fuel, electricity, and ice	1935–39=100	109.7	109.4	109.9	109.5	99.0
Housefurnishings	1935–39=100	143.6	143.0	141.7	128.3	101.3
Miscellaneous	1935–39=100	123.1	123.1	122.9	118.4	100.7
Retail food prices (large cities)						
Retail price index: All foods	1935–39=100	137.3	137.4	136.5	136.1	95.2
Cereals and bakery products	1935–39=100	108.7	108.6	108.6	108.5	94.5
Meats	1935–39=100	130.2	129.9	129.7	131.0	96.6
Dairy products	1935–39=100	133.5	133.5	133.6	133.5	95.9
Eggs	1935–39=100	169.6	188.5	186.7	154.0	91.0
Fruits and vegetables	1935–39=100	168.9	164.2	160.7	166.7	94.5
Beverages	1935–39=100	124.4	124.3	124.3	124.4	95.5
Fats and oils	1935–39=100	123.4	123.3	123.2	124.0	87.7
Sugar and sweets	1935–39=100	126.4	126.4	126.5	126.6	100.6
Wholesale prices						
Wholesale price index: All commodities	1926=100	104.9	104.7	104.4	103.3	77.1
All commodities other than farm products	1926=100	100.1	100.0	99.9	99.1	79.5
All commodities other than farm products and foods.	1926=100	99.1	98.9	98.8	97.8	81.3
Farm products	1926=100	126.2	125.5	124.4	121.8	65.3
Foods	1926=100	104.7	105.5	105.1	104.9	70.4
National income and expenditures						
National income payments, total (BFDC)	Millions of dollars.	13,320	14,405	13,253	12,541	[9] 5,771
Consumer expenditures for goods and services, total (BFDC).	do		[13]26,646		[14]24,787	[13]16,651
Retail sales, total (BFDC)	do	5,463	7,445	6,214	4,883	[8] 2,860
Production						
Industrial production index, unadjusted (FR): Total.	1935–39=100	231	230	232	240	109
Manufacturing	1935–39=100	248	248	248	259	109
Minerals	1935–39=100	133	131	140	133	106
Bituminous coal (BM)	Thousands of short tons.	52,200	44,735	50,215	53,975	32,905
Construction expenditures, all types (excluding maintenance, except in farm construction).	Millions of dollars.	335	346	379	377	[8] 442
Building construction started in urban areas	do	66	70	90	87	([10])
New family-dwelling units in nonfarm areas		7,446	10,768	11,600	17,300	[8] 32,300
Carloadings index, unadjusted (FR)	1935–39=100	132	128	144	133	101

[1] Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines). Most of the current figures are preliminary.

[2] 10-month average—March to December 1940.

[3] Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from employment in civilian labor force mainly because of exclusion of such groups as self-employed and domestic and casual workers.

[4] Includes workers employed by construction contractors and Federal force-account workers (nonmaintenance construction workers employed directly by the Federal Government). Other force-account nonmaintenance construction employment is included under manufacturing and the other groups.

[5] December 1943.

[6] January.

[7] Cumulative frequency rate, January to December 1944.

[8] Cumulative frequency rate, January to November 1944.

[9] Cumulative frequency rate, January to December 1943.

[10] Not available.

[11] The same series as those formerly published in this table as "Strikes."

[12] For the coverage of this index, see p. 637.

[13] Data for fourth quarter.

[14] Data for fourth quarter, 1943.

MONTHLY LABOR REVIEW

MARCH 1945

Effects of War-Contract Cut-Backs on Selected Plants [1]

Summary

DURING May and June 1944 the Bureau of Labor Statistics made a survey of 80 establishments in 25 localities to study the effects of cut-backs[2] in war contracts upon the plants, employees, and communities involved. The cut-backs varied greatly in size. In 9 plants production was wholly discontinued after the cut-back and all employees were released, and in 11 other plants employment was reduced to less than half the former level. On the other hand, in almost half of the establishments employment was reduced less than 25 percent. The total decline in employment in the 53 plants significantly affected by cut-backs amounted to 91,224, an average of 1,721 for each establishment.

The rate of voluntary separations increased markedly during the reduction period at most plants, but lay-offs were the principal means used to effect reductions in employment. Some type of seniority was the primary basis for selection of employees for lay-off in nine-tenths of the plants. In most of the plants visited, staff adjustments following cut-backs were accomplished without appreciable modifications in the basic workweek, and in only a third of the establishments was any change made in the number of shifts scheduled per day.

A few companies were able to avoid dispersion of their work force by interim transfer of their workers to other plants in the vicinity; in most cases, however, even temporary reductions resulted in almost complete loss of the separated employees to the plant. Most plants receiving cut-backs found it necessary to balance their staffs, during the adjustment period, by means of intraplant transfers of employees. On the average, about three workers were transferred during this period for every four laid off. At most plants the transfers involved no change in status or skill level, and relatively little retraining was required.

In most cases unions did not participate in handling the staff adjustments beyond checking or furnishing seniority lists and negotiating minor disputes. The companies usually adhered closely to contractual provisions. At the majority of the establishments

[1] Prepared in the Bureau's Productivity and Technological Development Division by George E. Sadler and Betty C. Proudfoot, based on field studies by Maynard C. Heins, Leon Theodore, and the authors. The survey was carried out under the supervision of James M. Silberman.

[2] The term "cut-back" is here used to indicate cancellation of contracts as well as reduction in the volume or size of the contract. Scheduled increases in production which were cancelled before any work was done, sometimes referred to as "paper cut-backs," were not covered in this survey.

there were no significant grievances resulting from the reductions, and at two-thirds of the plants there were no noticeable effects upon the workers' productivity and morale. In a few plants, however, serious problems arose; major contributing factors were lack of sound labor relations and a loss of the feeling of war urgency.

In two-thirds of the areas, the cut-backs either released so few workers that there was no appreciable effect on the labor-market situation, or the demands for labor were so large that the release even of substantial numbers of employees failed to relieve the shortage. Most of the released men in all areas were placed in other jobs either immediately or after relatively short periods of job hunting, although not always at comparable rates. Many women, however, were unable to obtain other employment, and a large number voluntarily left the labor market. In most areas, no serious continuing unemployment resulted from the cut-backs and there was no appreciable effect upon local business activity.

Purpose and Scope of Survey

The Bureau's study, made during May and June 1944, covered certain plants which had received cut-backs during the first large wave of war-contract cancellations which began in November 1943, reached a peak in February 1944, and continued for several months longer. An effort was made to determine the effects of the reductions on the establishments, workers, and communities involved. The study covered the experience of the companies during and following the cut-backs, the adjustments faced by the employees, and the effects upon business activity and labor-market conditions in the communities where the companies were situated. The data were obtained by representatives of the Bureau, who interviewed plant managers, unions, local government agencies, and officials of civic, educational, and business organizations.

At the time the survey was made, uniform and detailed information about the cut-backs could not be obtained from other sources. An investigation of the subject seemed desirable because of the magnitude of employment changes involved. It was also believed that a record of the experiences of companies, workers, and communities at that time might help in carrying through with less friction the larger cut-back program which would be imposed later, after victory in Europe. The results of the survey were made available to other interested Government agencies, particularly those charged with the responsibility of planning future war-contract adjustments.

The survey covered 80 plants in 25 cities and towns; 41 of the companies and 14 of the communities were in the East North Central region. Other regions were sampled less intensively, because of smaller numbers of cut-backs, but at least one company was visited in each region except the West South Central, Mountain, and Pacific regions.[3]

---

[3] The number of companies and the communities visited in each region were as follows: New England—14 companies in Bridgeport, Hartford, and New Haven, Conn., and Lowell and Springfield, Mass.; Middle Atlantic—15 companies in Buffalo, N. Y.; East North Central—41 companies in Chicago, Ill., Evansville, Ind., Detroit, Flint, and Grand Rapids, Mich., Akron, Canton, Cincinnati, Cleveland, Port Clinton, and Toledo, Ohio, and Milwaukee, Racine, and Eau Claire, Wis.; West North Central—6 companies in Des Moines, Iowa, Minneapolis and St. Paul, Minn.; South Atlantic—3 companies in Atlanta, Ga.; and East South Central—1 company in Nashville, Tenn.

The communities visited ranged in size from one-industry towns of less than 20,000 population to the huge war-production centers of Chicago, Detroit, and Cleveland. However, most of the cities were typified by diversified industry and in 1940 had populations between 100,000 and 400,000. All types of labor-market conditions were represented, from War Manpower Commission Group I acute labor-shortage areas to Group IV labor-surplus areas.

All of the plants visited had received cut-backs on Army Service Forces contracts. Included in the sample were small and medium-size as well as large plants. A great variety of products had been made in these plants before the war, but each was devoted largely or exclusively to war work at the time of the survey. Cut-backs at the plants visited occurred on contracts for the following items: Carbines and rifles; small-arms ammunition; shells and components; armored cars, half tracks, and components; bombs; explosives; machine-gun belt links; gun mounts; and fire-control devices and gun sights.

Extent of Cut-backs

EXTENT OF NOTICE TO MANAGEMENT

Notices of cut-backs were usually received by the companies from the Army Ordnance Division or from other procurement agencies. The cut-back notice was frequently given over the telephone from the local or district offices of the procurement agencies and was later confirmed by telegram or letter. Occasionally such letters or telegrams came directly from Washington, with no prior indication to the company that cut-backs were impending. Companies which had been engaged on subcontracts received their notices of cut-backs from the prime-contract holders. The local managements of companies with plants at various locations throughout the country usually received notices of the cut-backs from the companies' home offices.

Cut-back notification tended to be abrupt; in one-fourth of the cases the cut-backs were effective immediately upon receipt of the notice, and in more than half of the cases notices of less than a month were given. At many of the companies, however, the notices were anticipated, since unofficial warning that cut-backs could be expected had been given. In some cases, company officials realized that their plant's production was part of a program which was undergoing modification.

Some of the companies which reported that the notice given was adequate were among those receiving abrupt notice; on the other hand, some which reported that the notice given was inadequate were among those receiving the most notice. The most common suggestion for Government action made by company officials was that more notice be given. Many of the officials cited 60 days as a desirable minimum, but whether any one fixed period of time would be considered adequate notice for a particular cut-back would depend upon the complexity of the adjustment which the work reduction entailed.

The details of one cut-back were decided upon at a meeting between representatives of all the manufacturers of the item to be cut back and officials of the procurement agency. Certain companies were successful in obtaining extensions of time or other modifications of

the cut-back orders through negotiation with officials of the procurement agencies.

CONTRACT SITUATION OF COMPANIES AFTER CUT-BACKS

The experience of the companies in adjusting their operations following cut-backs varied according to the proportion of the facilities affected, the rates of change occurring in the production of unaffected items, whether and how quickly new contracts were secured, and whether labor-management relations were favorable. The classification of all the plants visited according to any one of these factors does not necessarily yield groups of companies having similar patterns of experience, since no one of the factors dominates the experience in every case.

Among the 80 companies visited, 39 had by the time of the interview obtained new contracts to replace, at least in part, those affected by cut-backs. Fifteen companies had no new contracts, but production continued or was initiated on contracts which had been previously obtained. For 9 companies, the entire facility was released by the cut-back. The remaining 17 companies were generally little affected, mainly because only a small part of their total activity was involved.

The relative importance of the contract reduction for a given company may be indicated by comparing the number of employees assigned to work on the affected contracts with the total number employed in the plant prior to any reduction in employment. Information of this character is available for 70 of the 80 sample plants, and their experiences are shown by the following tabulation:

Percent of plant employment affected by cut-back:	*Number of companies*
Less than 20	12
20 to 40	18
40 to 60	12
60 to 80	7
80 or more	21

Companies obtaining replacement contracts.—As mentioned above, 39 of the companies had obtained new contracts, by the time of the interviews in May and June 1944, sufficient to replace at least partially those cut back. For example, one company was notified in February to cease shipments of 37 mm. shot within 10 days. About half of the company's production workers had been engaged on this contract. At the time the plant was visited a subcontract had been obtained and conversion was under way; however, production on the new contract was not scheduled to begin until July and peak employment was not expected to be reached until October. In nearly all of these 39 companies the cut-backs took the form of cancellation of contracts rather than of revision of production schedules.

In 14 of the above companies, production had been specialized and devoted principally to a single product. Accordingly, the cut-backs affected virtually all the companies' facilities. As a rule these cut-backs were replaced with several relatively small contracts, and at the time of the interviews only 3 among the 39 companies were engaged in the manufacture of a single type of product. As would be expected, the effects of the cut-backs were generally less severe in the 25 companies which had been engaged in a diversity of activities.

Companies not obtaining replacement contracts.—In 15 of the companies visited, the cut-back contracts had not been replaced with new contracts by the time of the survey interviews; however, some of these companies were in the process of tooling up for contracts which had been secured previously and others were attempting to obtain new contracts. One company, which received four cut-backs between November 1943 and February 1944, had been unable to obtain new work, but was retooling for contracts previously secured. Many of the workers released by the cut-backs were transferred to such work; although 70 percent of the company's employment was affected by the cut-backs, a reduction in force of only 45 percent occurred, and this reduction was temporary.

The proportion of facilities affected by the cut-backs did not exceed 70 percent in any of these companies, and in two-thirds the proportion was 40 percent or less. In 9 of these companies the cut-backs resulted in the cancellation of one or more contracts; each of these plants continued operation on other work. In each of the 6 other companies war production had been confined to a single item which was frequently delivered on a single contract. The cut-backs in these cases took the form of reductions in delivery schedules. This situation often occurs when the large Government-owned, company-managed small-arms ammunition plants are cut back.

Companies releasing entire plant.—The cut-backs resulted in 9 of the companies' releasing plants in which production on a single war product or contract was eliminated. However, some of these companies had other facilities nearby which were not entirely affected by cut-backs. All of the released plants were either owned by or under lease to the Government. As far as could be learned at the time of the interviews, no further use of these plants was contemplated in 5 of the cases; demolition had been started on one of these plants, but some of the others were to be maintained in stand-by condition against possible increases in future military needs. Facilities released by the other 4 companies were taken over by different managements for conversion to other war products. In none of the 3 cases in which estimates of post-conversion employment were available was the former employment peak expected to be attained again.

Companies not seriously affected.—In 17 of the companies visited, the cut-back did not result in significant changes in employment; only one of these companies had a lay-off, and it involved but a few employees and was of short duration.

The reasons for the slight effect of the loss of contract were various. In all but one case, a variety of war products was produced and often the plant held many contracts. For instance, one company manufactured many different war items, mostly on relatively short-term contracts no one of which required a substantial portion of the total work force. At the time of the interview, the plant was working on 12 major and about 60 minor items. Contracts had been placed, terminated, and cut back from time to time even earlier during the war period. The management regarded adjustments in production schedules of the type brought about by cut-backs as part of the normal routine; under peacetime operations, this company had experienced more substantial production fluctuations than any encountered in war production.

In 9 of these companies the contract cut-back represented such a small proportion of the total activities that the effects were of no consequence and were difficult or impossible to isolate; more than half of these establishments were large, each employing between 8,000 and 24,000 workers.[4] In 2 companies the cut-back occurred before production on the contract in question was under way, and in still another the Navy increased its orders for the item that the Army had cut back. In the 5 remaining companies of this group, the cut-backs did not affect substantial proportions of the employment and facilities; the absence of problems and lay-offs at 3 companies is attributable to unusually rapid conversions, and at the other 2 to the fact that production on other contracts was increasing more rapidly than and coincidentally with the curtailment of production on the cutback items.

Obtaining New Contracts and Converting Plant

NEW CONTRACTS

Companies which converted their facilities to other work after the cut-backs most commonly sought new prime contracts from the local Ordnance District or other procurement agencies. A few of the companies and even a few unions sent representatives to Washington for this purpose. Although nearly all of the companies sought new contracts more actively than merely by bidding on listed contracts, it was not uncommon for the procurement agencies to take the initiative and ask the companies to submit bids or take on certain contracts. Several companies were offered new contracts at the same time that cut-backs were announced. In general, excellent relationships existed between companies and procurement agencies. Officials of a few companies suggested, however, that means should be found to facilitate the securing of new prime contracts.

Subcontracts were obtained almost as often as prime contracts by companies seeking new work. These were usually secured by sending representatives to various prime contractors. In some areas, local organizations had drawn up lists of prime contractors or available "outside" work to aid managements in finding suitable subcontracts. Small subcontracts, available quickly and running for a relatively short period of time, were frequently used as stop-gap measures to ease the transition periods or to retain key personnel.

CONVERSION OF FACILITIES TO NEW WORK

Approximately a sixth of the companies visited resumed production of their peacetime product in at least a part of the facilities released by the cut-backs. In most cases this was a temporary expedient to keep an integrated work force intact during a period of preparation for other war work. The War Production Board granted a release on materials for this purpose in a number of cases.

Extensive reconversions were required not only by the 39 companies which secured new contracts specifically to replace cut-backs, but also by many of the companies which did not obtain such new contracts

[4] To illustrate, in one large mid-western plant the cut-back accounted for about one-eighth of one percent of the total value of the company's output. Very few employees were affected, and these were reabsorbed in other departments without difficulty.

and by all of the plants which changed management. Information on reconversion was obtained for all companies at which such information was available.

With few exceptions, the conversion of plant facilities did not involve radical changes in the nature of the work done. Companies were successful in finding new work to which equipment on hand could be adapted, and the majority of the conversions required nothing more than rearrangement of machinery. However, retooling was nearly always necessary; this involved providing machine tools with new cutting tools, resetting machine adjustments, making jigs and fixtures, and fitting presses with new dies. Although nearly a third of the conversions required that at least some new machinery be obtained and installed, in most cases the new equipment was needed to supplement equipment on hand, and represented a small proportion of that required for the new contract. In several cases, difficulties or delays in securing new equipment disrupted the scheduled conversion of facilities.

A different situation existed in those facilities which changed management after the cut-backs. Often none of the equipment in these plants was suitable for the new work, and the first step in conversion was the complete clearing of the space. In most cases, the old equipment was removed and either stored or moved to other plants by employees of the company whose contract had been cut back, but in one case a separate contractor not only removed the old equipment but installed the new machinery and production lines.

The length of time needed for conversion varied from a few days in several cases to more than 1 year in one plant. More than half the conversions required less than 2 months, and nearly nine-tenths required less than 4 months. Although late delivery of equipment was the most common cause of unexpected delays, difficulties in recruiting needed labor were nearly as common. Conversion schedules at several companies were held up by delays in removing Government-owned equipment or in securing materials and components and at another by the need for a considerable amount of experimentation in connection with the new contract.

Effects of Cut-Backs Upon Plant Employment

REDUCTION OF PERSONNEL

A number of factors determined the size of the work-force reductions. Of these the severity of the cut-back was the most important. Other factors were the availability of new contracts, the extent to which the released workers could be absorbed in the production of other items, and the speed with which such transfers could be made. With the exception of the 17 companies previously noted as only slightly affected, all companies reduced the size of the work force following the cut-backs. The reduction in personnel varied from 5 to 10 percent for companies which either experienced comparatively light cut-backs or successfully integrated a conversion to new work with the decrease of activity on the old, to 100 percent for plants in which all production was discontinued.

In almost half of the plants, the reduction amounted to less than 25 percent of peak employment, while in three-fourths of the establishments the decrease was 50 percent or less. The decline in employment

for the 53 plants which were significantly affected by the cut-backs and which continued in operation totaled 91,224 and averaged 1,721. This reduction in force represented an average cut in personnel of 40 percent from the peak employment preceding the cut-back.

In most instances, the reductions were effected principally by laying off the employees. The ratio of employees laid off to the total reduction in employment varied widely between individual companies. In approximately three-fifths of the plants, lay-offs accounted for more than 50 percent of the total reduction in employment. In 7 plants, lay-offs exceeded the total reduction during the cut-back period, since accessions in the whole plant more than compensated for lay-offs in affected departments. Many of the plants, however, were able to make their adjustments in personnel with relatively light lay-offs, and in about a fourth of the establishments no lay-offs were necessary.

In the 61 plants which made lay-offs during the cut-back period, the number of employees laid off ranged from 14 to 10,629; however, more than half of these lay-offs affected fewer than 500 persons. In only 3 plants were more than 75 percent of all employees laid off.

In nine-tenths of the plants reporting the basis for selecting employees to be laid off, some type of seniority was the primary determinant; plant-wide seniority governed in half of the plants reporting, and length of service in the particular department in a third. The proportion of establishments selecting employees according to length of service was highest in those cases in which contracts with nationally affiliated unions were in effect; however, seniority was important in all plants, irrespective of union status.

In addition to lay-offs, other factors in the reductions were voluntary separations, discharges, and military withdrawals. In 15 plants, the total decline in employment was attributable to such separations, while in a number of other plants they exceeded lay-offs. Quits, discharges, and military withdrawals accounted for 35 percent of the total reduction in force in the 53 plants which were significantly affected by the cut-backs and which continued in operation.

The rate of voluntary separations increased markedly during this period in nearly all plants. Some companies urged all employees who had prospects of other jobs to quit and take them, and most of the companies issued certificates of availability freely to workers who requested them at this time. In other instances, however, the demands of the production schedule prohibited significant numbers of separations until operations were essentially completed. The relative importance of voluntary separations and lay-offs in effecting the total reduction in force reflected management policy, although the wage scale of the plant cut back, the morale of the work force, and the availability of comparable jobs in the area were also important factors.

In a few plants, the management weeded out and discharged inefficient workmen during the period of adjustment to cut-backs. In general, however, the reduction in force was almost entirely accomplished by voluntary separations and lay-offs based upon seniority, so that discharges accounted for an insignificant proportion of the reduction. Although in some plants military withdrawals increased, since the cut-backs affected the deferment status of workers, in most cases the proportion of military withdrawals was relatively constant, and men released by the cut-backs were not inducted into the armed forces in large numbers.

TEMPORARY TRANSFERS

A few companies were able to avoid dispersion of their work force when faced with temporary shut-downs for conversion to other products by arranging interim transfers of workers to other plants in the vicinity. This system of "negotiated transfers," although used in several areas, was most common in Chicago where the U. S. Employment Service had formalized the procedure and assisted with its administration. Difficulties were frequently encountered when the plants temporarily laying off employees had paid exceptionally high wage rates, and transfers could not be negotiated for workers except at lower rates. The success of the plan at Chicago is difficult to evaluate, as the plants visited had not begun to recall workers by the time of the interviews, and the proportion of workers who exercised their option of not responding to recall is not known. However, transfers of this type were not particularly popular in other areas, and many companies refused to hire employees on a temporary-transfer basis.

RECALL EXPERIENCE

Approximately half of all of the plants visited had made attempts to recall laid-off employees. In the 48 plants for which information is available, 16 percent of all employees laid off were later rehired. Although one plant succeeded in recalling 95 percent of the laid-off workers, and a second approximately 75 percent, these plants were unusual. The average percentage of employees called back by plants which had not replaced cut-backs with new contracts was virtually the same as that in companies which had converted their facilities to other work. This suggests that the proportion of laid-off workers rehired was limited primarily by the availability of the employees, since plants with new contracts required additional personnel to reconstitute their staffs, while plants not replacing cut-back contracts rehired only to replace turnover.

Internal Labor-Force Adjustments

CHANGES IN WORKWEEK

In most of the plants visited, adjustments following cut-backs were accomplished without significant modifications of the basic workweek. In three plants, however, temporary plant-wide reductions to 40 hours per week were made, while in two other plants several departments were reduced from 48 to 40 hours per week. Five establishments reported that hours in excess of 48 per week were eliminated after the cut-back.

In approximately a third of the plants visited, some change in the shift schedule was made, following the cut-backs. The extent to which shifts were eliminated varied with the nature of the work reduction and its relation to the plant's total production commitments. In some instances, only departments making the affected item were involved, while in others it was necessary to make the changes on a plant-wide basis. Likewise, some managements found it necessary to eliminate two shifts, while in other plants only one shift was discontinued. In several establishments, the eliminations were temporary, and shifts were restored after new contracts were in production. In

other instances, however, the reduced schedule was to be continued indefinitely. The changes in shift schedules are summarized in the following tabulation:

	Number of companies
Total companies studied	80
No shifts eliminated	54
Plants eliminating shifts	26
Changes affecting entire plant	20
Shifts reduced from 3 to 2 per day	9
Shifts reduced from 3 to 1 per day	8
Shifts reduced from 2 to 1 per day	3
Changes affecting certain departments	6
Shifts reduced from 3 to 2 per day	4
Shifts reduced from 3 to 1 per day	2

TRANSFERS OF EMPLOYEES WITHIN COMPANIES

Most plants receiving substantial cut-backs found it necessary to balance their work force by shifting employees to other jobs or departments. The degree to which transfers were carried out was greatly determined by the nature of the production, management policy, and the transfer provisions in union contracts. In almost all instances, the basis of selection for transfer was similar to that for lay-offs. Employees were usually given the option of lay-off, and sometimes preferred it to transfer. The proportion of employees accepting transfer varied widely, depending on the availability of other work in the area, the relative wage rates of the plant, and the extent of demotion, if any, incident to the transfer.

Demotional transfers occurred when workers whose jobs were eliminated by the cut-backs displaced ("bumped") workers with less seniority from lower-paying jobs. The elimination of jobs sometimes resulted in the downgrading of a succession of workers, and lay-offs were made only at the lowest levels. This situation was common in many companies in which strict, plant-wide seniority was the sole basis for lay-offs. Demotional transfers were rare in plants which received only minor cut-backs and were able to transfer employees to unaffected departments, as well as in plants where the cut-backs were counteracted by new war contracts of similar magnitude.

Most transfers were horizontal rather than demotional, and skill levels remained virtually unchanged. Of the 58 plants which transferred workers after the cut-backs, 36 reported that no reductions in job classifications or rates of pay were necessary. Plants manufacturing either a single product or several products of a similar type were usually able to arrange transfers throughout the entire plant; however, in establishments which had a number of dissimilar products, interdepartmental transfers were frequently impracticable.

In approximately a fourth of the plants visited, no transfers were made; in another fourth, less than 25 percent of all employees were transferred. In contrast, in 19 of the plants the majority of the employees were shifted, while in 9 of these plants all or almost all of the plant's workers were transferred to new jobs. In those companies for which reliable statistics are available, 3 workers were transferred for every 4 laid off.

RETRAINING OF TRANSFERRED EMPLOYEES

Most of the transfers involved only minor changes in the tasks performed by production workers. Some companies, however, converted to entirely different work, making special training of key personnel necessary. This type of training was often accomplished by sending the men either to the companies which manufactured the new equipment or to plants already employing the new processes and techniques. Classroom instruction and courses in technical schools were not used for this specialized training, although many companies had formerly arranged for key workers and supervisors to take the WMC Training Within Industry courses or other instruction of a general nature. The key personnel were then considered qualified to retrain the production workers.

In nearly every case, retraining of production workers was done on the new job, although a few companies set up "training lines," and one held classes on the new work in the plant. Many of the transferred workers remained on work so similar to that previously performed that only very limited retraining was necessary. In over half the cases, retraining was accomplished within a few hours or a few days; in only a few cases did the time needed for retraining exceed 1 month.

Retraining for production workers usually involved instruction in operating new machines, the use of new precision gauges and instruments, and the techniques of machining to very close tolerances.

EFFECT OF TRANSFERS UPON WAGE RATES

Of the 58 plants which transferred workers following the cut-backs, 36 reported that no reductions in job classification or rate of pay were necessary. In the main, these were plants which received only minor cut-backs or obtained new war contracts to replace their cancelled production. Companies which were able to transfer employees to comparable jobs in unaffected departments also made no reductions in pay rates.

The reductions in wage rates which were made resulted primarily from demotional transfers. In nearly a third of all establishments making transfers, most of the transferred workers were downgraded and received significant reductions in rates of pay. At two large establishments, the average pay for all transferred employees was reduced approximately 10 percent; at another plant, the hourly rate of workers transferred declined from $1.00 to 60 cents. At two plants, wage rates of men declined from 15 to 20 cents per hour, while women took reductions of from 10 to 14 cents per hour. However, reductions in wage rates were also received as a result of shifts to civilian production, and in each of 5 plants a few employees received lower rates although job levels remained unchanged. At one plant which resumed civilian production for an interim period, straight-time workers received about the same wages, but employees on incentive rates earned about 20 percent less than before. In a number of establishments where no decrease in pay was involved in transfers, the new duties were heavier or more disagreeable than the former tasks.

Cut-Backs and Labor-Management Relations

NOTICE TO EMPLOYEES

There was wide variation in the amount of notice given to employees, but in nearly all cases some effort was made to give them warning before they were transferred or laid off. In about half of the companies for which data are available, employees were notified of lay-off during the week prior to their separation, and in a few cases advance notice was given ranging up to a month or more. On the other hand, employees of 5 companies were given no previous warning, and were notified of lay-offs only when they received their final pay envelopes.

Most frequently employees received individual notice of changes in status directly from foremen or other supervisors. In several plants, personnel representatives talked to all employees individually. At one large plant, the personnel director assembled a crew of 25 interviewers from among company officials and supervisors as well as from his own department. Each affected worker was excused from his job long enough to talk to one of these interviewers. During the interview it was explained that the work was being terminated in accordance with plans of the armed services, and that the worker was needed, if not at this company, at other neighboring companies.

Many plants took pains to inform all the employees about the causes for and extent of the cut-backs before individual notices were given to those affected. The dissemination of accurate and official information concerning the cut-backs did much to minimize the effect of rumor and helped to maintain morale. Most plants gave information concerning the cut-back to all employees, through at least two of the following media: Unions or labor-management committees, notices or letters posted on bulletin boards or sent to employees, articles in company magazines, and mass meetings of employees or announcements over public-address systems.

UNION PARTICIPATION

Of the 69 plants for which information was available, 61 were organized and operating under union agreements. Forty-one of the contracts were with C. I. O. locals, 12 with A. F. of L. affiliates, 7 with independent unions, and 1 with a District 50 local of the United Mine Workers. Although the union was usually notified of the cut-back by the management, in most cases it did not participate in effecting the adjustment beyond such traditional duties as checking or furnishing seniority lists and negotiating minor disputes.

In about a third of the companies which notified unions about the cut-backs, the unions played an active part during the adjustment period. This included, generally, participating with management in discussions of the problems involved in the work reduction, notifying employees of their separation date, or informing employees of the facts of the situation in order to maintain morale. Some of the unions were asked to help in planning lay-off and transfer procedures, and in one case the union itself selected the employees to be laid off on the basis of the seniority lists. In practically all instances in which the union was invited to participate, the employees' morale remained high and there were relatively few grievances.

GRIEVANCES ATTRIBUTABLE TO ADJUSTMENTS AFTER CUT-BACKS

Fifty-three of the 76 companies for which information on grievances was obtained indicated that there were no grievances of any consequence resulting from cut-backs, and 14 plants reported that only a few arose. At only 9 plants was there a significant number of grievances.

Of the factors which tended to keep the number of grievances at a minimum in most plants, probably the most important were the availability of comparable jobs in the area and strict adherence to provisions of the union agreement concerning work-force adjustments. Plants with a background of sound labor relations also had few grievances. In every case in which the union participated in planning or handling the reduction, no serious grievances arose. Management representatives in areas where the labor movement is strong and of long tenure usually indicated that there were no grievances of any consequence during the work-force adjustments. On the other hand, of a total of 9 companies reporting the occurrence of numerous grievances, 5 were in an area where labor organizations have usually encountered strong opposition. Only 4 of the 13 plants visited in this area reported that no grievances of importance developed during the adjustment period. However, only 1 of these 4 plants experienced a sizable reduction in force, and this plant emphasized the unusually cordial relationship with the employees and their representatives.

As shown in the accompanying tabulation, the most common grievances reported were those regarding seniority status or classification on the seniority list, or disagreements resulting from demotional transfers.

	Number of cases reported[1]
Seniority lists improperly prepared, or not followed	11
Arbitrary reassignment, employee not consulted	5
Provisions of union contract not followed	5
Employees not placed on work which utilized their experience	4
Insufficient or no advance notice	3
Reduction in pay, employees performing same work for less pay	3
Employees required to work excessive overtime during large lay-offs	3
Union not allowed to participate in adjustment	2
Favoritism shown by management	2
Improper classification of workers for transfer or lay-off	2
Short crews	1
Supervision arbitrary	1
Employees not properly instructed for new jobs	1
Dispute over relative weight to be given seniority and ability	1
Certificate of availability not given on employee request even though there had been a large lay-off	1
Negro girls transferred to previously all-white department	1
Company's announced call-back program violated union agreement	1
Unjustified downgrading	1

[1] 53 companies reported that no grievances arose attributable to the cut-backs.

EFFECTS OF REDUCTION ON PRODUCTIVITY AND MORALE

Officials of two-thirds of the plants visited indicated that there were either no noticeable effects on productivity and morale or only very slight decreases attributable to the cut-backs. In most of these cases, the reason for the absence of a significant decline was the fact that the adjustments made necessary by the cut-backs were relatively minor.

In a few instances employee morale and productivity remained high despite large reductions in employment. This was due either to the availability of other jobs in the area or to positive efforts on the part of management, usually with the cooperation of the union, to ease the transition of the workers and prevent the loss of morale. For example, four plants were able to make a smooth adjustment even though large cuts in personnel were necessary, because of steps taken by the companies to minimize the impact of the lay-offs and gain the confidence of the employees. Morale and productivity remained high and practically no grievances arose. In two of the plants, the company guaranteed that no worker would be terminated before he was placed in another position; in the other two, the union was asked to participate in planning and handling the adjustment. The experience of all four plants indicates the advantages, during a period of personnel reduction, that accrue from amicable labor relations.

In three plants visited, two of which experienced large reductions, it was stated not only that morale remained high but that absenteeism and turnover actually decreased, and that the output of the employees increased noticeably. The improvement in these plants was due both to the desire of the workmen to avoid lay-off or transfer, and to the attempts of the companies to impress on the employees a sense of continuing war urgency.

In 10 plants, both the morale and efficiency of the workers were badly affected, in 8 other plants morale was lowered but no decline in work application of employees was observed. Representatives of the companies and unions in about three-fourths of these 18 plants attributed the bad situation to the large cut in employment; in about half of the plants poor labor relations may also have been a contributing cause.

In 6 of these 18 companies, each with a history of poor labor relations, serious difficulties were experienced during the period of labor-force adjustment, even though the reductions in employment in some instances were relatively minor. In each of these plants, employee morale was seriously affected, turnover increased, and in some instances absenteeism as well. Many grievances were presented, and in some plants there were disputes concerning the methods of handling the lay-offs and placing transferred employees. In all 6 plants there was a decided drop in output; in 3 cases the decline was so great that employees were accused of deliberate slow-downs; employee spokesmen, on the other hand, claimed that improper placement and understaffing were responsible for the production declines. Some of the decrease in efficiency was due to a loss of the feeling of war urgency, occasioned by the cut-back.

Relatively few of the company representatives reported increased turn over resulting from the workers' desire to seek civilian-industry jobs of a permanent nature.

Effect of Cut-Backs on Communities and the Labor Force

EFFECT ON LABOR SUPPLY

Fifteen of the 24 [5] localities visited are now classified by the War Manpower Commission as Group I and II labor-shortage areas, while

[5] Minneapolis and St. Paul are included as one labor-market area.

9 are in Group III or IV labor-surplus areas. The contract reductions did not exert a particularly marked effect upon the balance of labor supply and demand in most of the areas surveyed. In two areas classified as Group III before the cut-backs, the supply of labor which became available permitted reclassifications to Group IV; however, both of these areas were later again classified as Group III, because of out-migration and the demands of new establishments in the vicinity. One other area formerly classified as Group I was changed to Group II after cut-backs released a sufficient number of men to reduce the severity of the labor shortage.

In almost a third of the areas, so few workmen were released that there was no appreciable effect on the labor-supply situation, regardless of the area classification. In all other districts cut-backs released substantial numbers of workers, ranging from a few thousands to many thousands. In almost half of these areas, even the relatively large number of workers released failed to relieve the severity of the labor shortages, either because the majority of the released workers left the area, or because expanding demands and the severity of the existing shortage prevented any change in the labor-market classification. Heavy lay-offs following cancellations or reductions of contracts in 7 labor-surplus areas resulted in significant increases in the numbers of job seekers. In many of these areas, however, the majority of the surplus labor was again absorbed, and existing surpluses were chiefly in female applicants considered suitable only for special types of work.

DISPOSITION OF RELEASED WORKERS

Detailed statistics regarding the disposition of all released employees were not available for any area. However, in all instances it was possible to obtain some information on the proportion of men and women who were placed locally, migrated, or dropped out of the labor market entirely. Most of the released workers remained in war work in either the same or other areas. In certain cases substantial numbers of released workers returned to farms.

In about one-third of the areas almost all workers released by cut-backs were immediately absorbed in other war work, generally at similar rates of pay. Very few men left these areas, and less than 10 percent of the released women dropped out of the labor market. In several other areas, although the majority of the released male workers were placed in other local war jobs at similar rates of pay and very few left the area, large numbers of the released women left the labor market. The rates of pay for those women who obtained other jobs were in general substantially below the rates on their former jobs. All except one of these localities were classified as Group I or II labor-shortage areas.

In one-fourth of the areas—all classified as Group III surplus—over half of the released male workers were placed in other local war jobs, after job-shopping periods of varying length. Rates of pay for new jobs, in most instances, were approximately the same, but many men obtained work only at substantially lower rates. Between 15 and 30 percent of the men released in these areas migrated, and the majority of the women who lost their jobs dropped out of the labor market. The few who were placed in other local jobs, often in less-essential work, received considerably lower rates of pay.

In the remaining localities, two of which were classified in Group II and two in Group III, the majority of the men released as the result of war-contract cut-backs migrated to other areas. Most of the released women left the labor market. A majority of the released employees, both male and female, who were placed in other local jobs received much lower wages than in their former jobs.

UNEMPLOYMENT RESULTING FROM CUT-BACKS

In half of the areas no unemployment resulted from reductions in personnel following cut-backs. Most of these localities had been classified as areas of critical labor shortages. In about one-fourth of the areas some unemployment followed the cut-backs, but in almost all of these all men seeking work eventually found other jobs or left the locality. In a few places there were still several hundred unemployed men at the time of the survey. In all areas in which unemployment occurred, substantial proportions of the released women were still seeking work at the time of the interviews, and an even larger number had dropped out of the labor market entirely.

EFFECTS ON GENERAL BUSINESS ACTIVITY

In four-fifths of the areas surveyed, it was stated that the cut-backs had no appreciable effect on the general level of business. This was to be expected, since the ratio of released workers to total employment was generally small, and the majority of the employees were placed in local jobs in more than three-fourths of the localities.

In the remaining areas there was some decrease in local business activity; the decreases were estimated at from 10 to 20 percent of the peaks of business activity preceding the cut-backs. Some areas were saved from more serious effects by the location of new enterprises in the area, or the expansion of labor demands of some of the established plants.

Probable Volume of Post-War Construction [1]

Part 2. Demand for Private Construction

Summary

THE volume of construction (exclusive of maintenance and minor repairs) started during the final year of the war is expected to be 4½ billion dollars at 1940 cost levels, and for the first 5 years thereafter the average will be 10.9 billion dollars per year, starting at 7.8 billion dollars in the first year and increasing to 12.1 billion dollars in the fifth. This estimate assumes that no public construction will be undertaken mainly to provide employment or stimulate business. The rate of development in design of structures, materials, construction methods, and organization of the industry has been accelerated by the wartime program, but resemblances between post-war and pre-war conditions will greatly outweigh the differences.

An average volume of 7.9 billion dollars per year at 1940 cost levels is expected for private construction started during the first 5 years following defeat of Japan, and a maximum volume of 8.6 billion dollars for such work started during the fifth year. Half of the total will be nonfarm residential building, about 30 percent nonfarm nonresidential building, about a seventh will be utility construction, and the remainder construction on farms. All major conditions are conducive to active sale of promotional houses, but apartment construction will be much below former peaks. The average for private nonfarm residential construction will be 850,000 dwelling units started per year. Commercial building of 1.2 billion dollars per year will consist of a substantial volume of new work, but an even greater volume of additions, alterations, and modernization. Industrial construction will be somewhat over half of commercial in volume, but will consist more largely of new structures and less of additions and alterations.

Residential-Building Situation

There is every indication of a large potential demand for residential building. As numerous estimates of the need for such construction have been made, it is sufficient here merely to mention briefly the pertinent factors usually grouped under this term. These may be divided between those apparent from the Housing Census of 1940, and those which have since developed.

HOUSING SITUATION IN 1940

In 1940 there was a relatively low vacancy ratio, extensive doubling up of families, appreciable occupancy of irregular units, and use of several million unfit dwelling units.

The Housing Census reported about 1,400,000 vacant nonfarm units for sale or rent, which gave a gross vacancy rate of 4.8 percent.

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[1] Prepared in the Division of Construction and Public Employment by Alexander C. Findlay. This is the second of three articles. The first, which appeared in the Monthly Labor Review for January 1945, presented the basic governing conditions, the assumptions made, and a summary of the estimate; the third article will discuss the major types of public construction.

These included 290,000 seasonal units, however, as well as an unknown number of surplus units in areas of declining population and employment, and substandard or unfit units which, from information given, must have totaled at least 250,000. Adjustment for these would reduce the usable vacancy rate to not over 3 percent at the highest, and probably to not over 2½ percent, in comparison with the figure of 5 percent generally accepted as a necessary "cushion." This vacancy rate, although not alarming, indicates that no surplus for future needs was present.

About 1,345,000 "subfamilies" were reported as doubled up with other nonform families,[2] exclusive of other forms of doubling not reported in the Census. Almost 167,000 families were living in "other dwelling places"—boats, tents, trailers, and units of other miscellaneous types.[3] In some cases such arrangements were probably the result of personal preference, but it is likely that more commonly the motives were financial.

In addition, there were several million substandard units which could be brought to reasonable standards only at prohibitive expense. Any estimate of these is hindered by the absence of exact standards, but value provides a useful guide. More than 4,400,000 occupied nonfarm units were valued, with land, at less than $1,000 or rented for less than $10 per month. Although these included some entirely satisfactory units in localities of low real-estate prices and rent levels, there can be little doubt that they were greatly outnumbered by rudimentary and deteriorated and otherwise objectionable units elsewhere with value or rental above the limits used. Without attempt at further adjustments which would raise the figure, 4,400,000 may be taken as a minimum estimate of the number of substandard dwelling units for which improvement would not be practicable. On the basis of other criteria, the National Housing Agency has estimated the number of substandard units in 1940 as approximately 7 million.[4]

CHANGES SINCE 1940

Factors favorable to increased demand.—Since 1940 the number of families has been increasing rapidly, and this increase may be expected to continue. The Census Bureau has estimated an increase in all families from January 1, 1940, to January 1, 1955, of almost 7,300,000.[5] While the estimated rate of increase varies considerably during this 15-year period, the average is about 485,000 per year. Continuance of the rural-to-urban population trend would mean an average annual increase in nonfarm families of perhaps 535,000. Many families are living for the duration in temporary or unsatisfactory accommodations, or are sharing quarters with others, because of wartime housing shortages. Many of the families recently formed have not yet been established as households, or have ceased that status temporarily. These conditions are of course temporary, and on conclusion of the war will be followed by a sharp increase in demand for normal housekeeping accommodations. The National Housing Agency has esti-

[2] 16th Decennial Census, Population and Housing, Families, General Characteristics, table 10.
[3] "Other dwelling places" were counted only when occupied by families having no other regular living quarters.
[4] National Housing Bulletin 1: Housing Needs, A Preliminary Estimate (National Housing Agency, Washington, 1944), p. 15.
[5] Series P-1943, No. 2: Estimated Number of Families in the United States, 1940 to 1960 (U. S. Bureau of the Census, September 30, 1943), table 4; medium estimate used.

mated that 1,400,000 servicemen's households will be established or reestablished following the war.[6]

The tremendous internal migrations to war centers which have occurred since 1940 will undoubtedly be reversed to a considerable degree, but probably with the net result of a major permanent shift in population to industrial centers, particularly in the West and South. Consequently, housing and population are unlikely to be as well fitted geographically as before the war. Total housing need may be affected only slightly by these shifts, but effective demand will be increased. In areas of declining population, there will seldom be an excess of units meeting reasonable standards, because substandard units will usually be greater in number than the reduction in number of families. At the same time, concentration of the increase in other areas will mean more acute local shortages, with intensified effect on rental levels and salability of houses.

Meanwhile there have been both additions to and deductions from the 1940 housing inventory. In the 4-year period 1940–43, a total of 1,870,000 dwelling units was constructed, exclusive of 313,000 temporary public units. Not all of these 1,870,000 units represent permanent additional accommodations, however. Considerable numbers were built in areas where reduction in employment after the war is likely to bring a housing surplus. Other new units, urban and rural, were essentially slum dwellings, accepted because of the financial circumstances of their occupants but not constituting a real housing asset. The number of these is unknown, but detailed study of building-permit records for certain periods and localities supplemented by additional information indicates that it was probably about 150,000. Additional increase in dwelling units came from conversion—some of it permanently useful, and some suited to emergency conditions only. The net effect of all these changes has been an increase, during the period, of probably not more than 1,700,000 dwelling units which can be regarded as a permanent housing resource.

Along with this increase, however, has come physical loss from fire and other disaster, demolition, abandonment, and conversion to nondwelling use. A commonly accepted figure is 50,000 nonfarm units per year, of which about 20,000 are destroyed by disaster (in most cases, fire) and most of the remaining 30,000 are demolished. While data are much less satisfactory for such losses than for new construction, such checks as have been made indicate that the figures are at least roughly accurate.

Numerous estimates have been made, ordinarily on the basis of age, of the replacement rate necessary to offset deterioration. It is seldom because of age alone, however, that buildings reach a stage at which they cannot be brought to accepted standards of health, safety, and decency without prohibitive expense. Rather it is because of other conditions accompanying the passage of time—neglected maintenance, abuse, change of neighborhood environment, change of accepted standards affecting the basic structure, etc. Units rendered unfit by these developments up to 1940 are already included in the estimate of those needing replacement. By the end of the war, probably at least 500,000 additional pre-1940 units will have deterioriated to such a state that necessary repairs plus additional work to overcome initial inadequacy will cost more than their value justifies.

[6] National Housing Bulletin 1, p. 9.

The average construction rate needed during the first 10 years following the war has been estimated by the National Housing Agency at 1,150,000 to 1,610,000 nonfarm dwelling units per year, depending on the period over which replacement of substandard dwelling units is to be extended.[7] These rates provide for the estimated increase in the number of families, for establishment or reestablishment of servicemen's households, for reduction in the extent of doubling, for replacement of units currently deteriorating beyond economical restoration, and for replacement over periods ranging from 10 to 30 years of units already substandard by the end of the war. Discussion is concentrated somewhat on a replacement period of 20 years, requiring an annual construction rate of 1,260,000 dwelling units.

These estimates of social need are obviously not intended to represent effective demand. Need and effective demand have not coincided in the past, and can be expected to coincide for an appreciable period only through the intervention of some type of control mechanism.

For those wishing to purchase or construct a house, financing terms are far more favorable than during previous periods of active construction. Under current FHA terms, a down payment of 10 percent of the appraised value brings ownership with a single mortgage, for a house selling for $6,000 or less.[8] Thus, purchase of a $6,000 house requires a down payment of $600 plus closing charges, and monthly payments averaging $35.48 during the period for interest, mortgage insurance, and amortization over a period of 20 years. Under the former system of first and junior mortgages, this monthly payment on such a purchase would ordinarily have been little if any more than sufficient to pay interest and to provide for the commissions or bonuses charged for periodical renewal of the short-term junior financing.

In addition, the "G. I. Bill of Rights" provides for Federal guaranty of loans to war veterans, to be used for equity payments. These will enable an indefinite (but probably large) number of veterans without accumulated funds for an equity payment to purchase houses; the entire purchase price will have been borrowed through the veteran's loan, plus a first mortgage on the house. Since the limit on the guaranty is 20 percent of the value of the house, but not over $2,000, such loans will affect the market to some degree for houses selling up to as much as $10,000.

Factors unfavorable to increased demand.—These factors favorable to construction will be partially offset by other considerations, however. Although noncorporate savings are now at an all-time high and post-war incomes also may be expected to be reasonably high, not all families wishing a new home will be able to obtain it. More than half of the nonfarm families receiving income from salaries and wages only [9] had incomes under $1,500, and more than a third had incomes under $1,000 in 1939. Even for 1942, it is estimated on the basis of earnings in the first quarter that 15 percent of all city families of two or more persons had incomes under $1,000 during the year, and that another 12 percent had incomes ranging from $1,000 to $1,500.[10]

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[7] National Housing Bulletin 1, pp. 18–19.

[8] Under present terms, mortgages are insured up to 90 percent of the first $6,000 plus 80 percent of the next $4,000 of appraised value of house and land, where this is $10,000 or less, and up to 80 percent of appraised value where this is over $10,000 but not over $20,000. In practice, selling prices of FHA-financed promotional houses have ordinarily been the appraised values.

[9] Individual incomes of less than $50 during the year from other sources were disregarded. Data based upon Sixteenth Decennial Census, Population and Housing, Families, General Characteristics, table 17.

[10] See Income and Spending and Saving of City Families in Wartime, in Monthly Labor Review, September 1942.

While post-war incomes may be higher, there is no likelihood that family incomes below $1,500 and below $1,000 will be eliminated. Few nonfarm families with such incomes will be able to assume purchase or rental obligations for unsubsidized new units. Other families will be hesitant to undertake home purchase because of uncertainty regarding future location and future employment. Unquestionably there will be many families well able to undertake home purchase, but preferring to use their money otherwise—for automobiles, household appliances, furniture, and in some cases probably for travel. Sales efforts for all of these items will be active.

Another offsetting factor is the unrealistic picture of post-war houses which has become somewhat prevalent. Post-war market surveys made by manufacturers of building materials, by other firms related to construction, and by trade associations show two fairly common misconceptions—a somewhat vague expectation of new materials and basically new design resulting in houses of fundamentally different character from those of the past, and quite concrete expectation of luxury-grade mechanical equipment, such as true air conditioning,[11] in inexpensive mass-market houses. An active effort to correct these impressions has been started through advertisements of materials manufacturers and others, and is likely to have some success. It will be reenforced strongly by the post-war houses themselves, which will be their own demonstration that the numerous irresponsible promises made by those outside the industry cannot be met at the present stage of development. Although misunderstanding of what is feasible will probably hinder purchase of homes for a time, it is likely to diminish fairly rapidly in influence.

Probable Volume of Post-War Residential Construction

NEW HOUSING

Under these conditions, it is estimated that the average volume of new private housing will be about 850,000 nonfarm dwelling units started per year during the 5 years following defeat of Japan, and of private plus public housing, about 900,000 units. Although this average of 900,000 units is only about 3 percent above the highest previous 5-year average of 872,000 nonfarm dwelling units per year, realized from 1923 through 1927, and is below the record of 937,000 attained in 1925, it is associated with an increasing rather than a decreasing level of activity. The 1925 peak was followed by successive annual reductions until a low point of 93,000 was reached in 1932. The post-war estimate, in contrast, will start from a relatively low level during the final year of war against Japan only. Volume during this year will be governed to a large degree by the time of year when Germany is defeated. If this occurs in late winter, so that plans for expansion can be ready early in the period of normal spring expansion, as many as 350,000 units may be started during the following 12 months. If the defeat occurs in midsummer or late summer, the effect during the remainder of the calendar year will probably be slight, and as few as 175,000 units may be started during the first 12 months. From this range, housing built by private activity is expected to increase to 550,000 units started in the first post-war year, to reach 900,000

[11] Providing cooling as well as heating, control of humidity, ventilation, and air filtration.

started in the third post-war year, and to reach 1,040,000 in the fifth year. The average construction cost of these is expected to be at a maximum of $4,200 each, at the 1940 cost level, for the units started during the first post-war year and then to decline gradually to about $3,550 for those started in the fifth year as simpler and cheaper houses become a larger part of the total. Estimates of number of dwelling units started, average construction cost, and total construction cost are given in the accompanying table.

Number and Construction Cost [1] of Nonfarm Dwelling Units to be Started During Final Year of the War and First 5 Years Thereafter

Year	Total number of units	Privately financed units			Publicly financed units		
		Number	Average construction cost per unit	Total construction cost (in millions of dollars)	Number	Average construction cost per unit	Total construction cost (in millions of dollars)
Final year of war	254,000	250,000	$4,000	1,000	4,000	$2,500	10
First 5 post-war years: Average per year	900,000	850,000	3,750	3,200	50,000	3,200	159
1st year	580,000	550,000	4,200	2,300	30,000	3,200	95
2d year	825,000	780,000	4,000	3,100	45,000	3,200	145
3d year	955,000	900,000	3,800	3,400	55,000	3,200	175
4th year	1,040,000	980,000	3,600	3,500	60,000	3,200	190
5th year	1,100,000	1,040,000	3,550	3,700	60,000	3,200	190

[1] Converted to 1940 cost levels. Multiplication of number of dwelling units by average construction cost in most cases gives a total construction cost slightly different from that shown, because of rounding of figures.

These operations will be facilitated by experience gained in the war housing program, in which both builders and general contractors built projects of several hundred units. With few exceptions, these projects were marked by more thorough planning of operations, more careful timing and control of materials, and greater use of power-operated tools than were general in pre-war promotional building. Numerous larger contractors accustomed to management procedures were introduced to the field of residential work, and many residential builders learned the possibilities present in large-scale operations. On some of the largest projects, materials were bought directly from manufacturers. In these respects, and others, the housebuilding industry matured substantially.

The result of this development will be projects of larger average size than before the war. Small operators who build a house or two at a time are likely to retain a place in the industry almost indefinitely, but an increasing part of total volume will probably be in projects of 25 to 50 units, and to some degree in projects up to about 100 units. It is likely that the largest projects of a few hundred units up to a thousand or more, which became somewhat common under war conditions, will be quite unusual when these special circumstances are no longer present.

The major expansion will come first in the moderately high-priced group of houses to be sold (with land) for $7,500 up to about $10,000, and in the considerably smaller field of even higher-priced houses, both promotional and built on contract, costing up to about $25,000. Current activity of residential architects indicates, however, that few mansions are likely to be built.

The moderately expensive group offers in many respects the most inviting field for early expansion. It will meet general public expectations best, because the prices will permit more extensive use of mechanical equipment and of the more-expensive newer materials than will the prices of the cheaper houses. These differences—in plumbing, heating, electrical installations, lighting, electrical appliances, closets and cabinets, glass blocks, tile and other ornamental treatment—are the features most effective in selling. Competition for the early market is likely to be primarily on the basis of design, finish, and equipment rather than price, with percent of gross profit higher than for cheaper houses.

This expansion will start as soon as metal products for the mechanical trades and also domestic appliances are available to the extent needed for this market—probably about 6 months after the end of the war—and will continue as the variety of mechanical, metal, and appliance items reaches its pre-war state.

While the field described will lead the expansion, it is not sufficient to bring the expected total volume, nor can it sustain its own volume for more than a few years. Only a minority of those desiring to purchase can pay $7,500 or more. Operations at lower prices mean lower gross profit per unit and will require more thorough planning of operations, but offer large rewards for those able to satisfy customer demand within allowable cost limits.

As in the past, the moderately large projects will commonly be in outlying locations where large tracts of land are available. Because of problems already mentioned, little progress can be expected during early post-war years in use of urban sites which have passed through a sequence of blight followed by demolition for rehabilitation. Increasing attention has recently been given, however, to the land resource provided in most cities by sparsely built subdivisions of the 1920's. Although some of these tracts are unsuitable, many of them are potentially good residential areas, well located, already provided with sewer and water lines and, not infrequently, provided also with sidewalks and paving. Unless another wave of speculation in vacant land develops, it will be cheaper to buy such lots even in those cases in which purchase and demolition of a few shacks is necessary to improve environment than to install utilities in raw land. It seems likely, therefore, that there will be a significant start on a new type of development, in which fairly large projects are built on scattered sites in a general neighborhood, with some existing houses interspersed between groups of new houses.

Private rental units will probably form a considerably smaller part of the total than in the past, and will be mainly in apartment buildings. Units in 2-family buildings reached their peak both in number and in percentage in 1923, when 175,000 were built, and have since declined greatly in importance. It seems unlikely that their average during the first 5 post-war years will exceed 50,000.

The building of apartments will be more active, but these are unlikely to approach either their pre-war peak of 257,000 or the prominence they are likely to attain some years after the period under consideration. In the early post-war period, not much over 100,000 apartment units per year seems likely. In accordance with a long-time trend, average size will probably decline. Most of the units are likely to consist of 3 rooms or less, suitable for families without

children or for temporary households consisting of groups of employed men or employed women. Many of these small units will be supplied with furnishings.

The apartment-house type of enterprise is now in a transitional stage. Although a substantial volume of apartments was built for permanent investment by individuals or organizations, for about two decades ending with the depression, the basic pattern was established to an increasing degree by speculative builders whose intention was to sell the property at the capitalized value of imputed earning power—that is, a price at which there would be a stated percentage yield to the owner annually if expected or assumed rental income and ownership expense were maintained. These operations were dependent almost solely on availability of sufficient financing, which during the height of this development was commonly obtained by means of appraisals also based on capitalization of imputed earning power. The opportunity for abuses given by this procedure have been so generally recognized, and the resulting losses have been so widespread and so severe, that it is unlikely to be revived on an extensive scale.

Instead, apartment construction will be motivated primarily by investment considerations. That means change toward much larger projects than were formerly customary, both to facilitate management and maintenance and to protect the investment through unified control of a development large enough to establish its own neighborhood characteristics. While there will be a rental market for such projects in the moderately high rental range of $15 monthly per room and over, the great market is for housing at lower rates. Demand for apartments is based partly on the freedom of the occupants from maintenance responsibilities and partly on the locations of the buildings, but in the case of families with children, mainly on lower rents than are necessary for detached houses providing comparable accommodations. As the monthly rental for acceptable units in acceptable locations falls, the number of possible tenants increases very rapidly, with probably the majority of all possible tenants not able to pay more than $8 monthly per room including heat. The market for 5- and 6-room apartments at higher rentals will probably be reduced through home purchase by many families able to pay these higher rentals. This reduction in market will be least in the largest cities, and will occur over a fairly long period, but may be expected to have at least latent influence at all times.

Through FHA, loans are available up to 80 percent of appraised value for responsible operators planning on permanent ownership. These will be used for construction of numerous projects of the "village" type, commonly in outlying or suburban locations. As in existing projects of this type, rentals will be suitable primarily for families with income considerably above average, families without children, and temporary housekeeping groups. The risks of luxury-grade apartments, with monthly rentals of $25 per room and over, are such that mortgages will be available only in unusually favorable circumstances. There have been several notable instances of direct investment in apartment projects by insurance companies, several such projects are scheduled for the early post-war period, and it seems likely that housing will ultimately become an accepted major field for institutional investment. Before that occurs, however, legislation

permitting such use of fiduciary funds, as well as certain other developments, will be necessary in most States.[12] Recent inquiry indicates that few if any insurance companies other than those which have already constructed housing projects as investments are planning to do so in the near future.

To fill the potential demand for low-rental apartments will require a lower yield to owners and mortgage holders than has been customary for apartment investment, availability of suitably located land, and the utmost economy in construction through skillful design and carefully planned operations. Ultimate meeting of this last condition will probably be accompanied by some reorganization of this part of the construction industry, resulting in greater integration of operations between the different kinds of site work and more direct procurement of materials. It will also require a more uniform pattern of annual operation to reduce the traditional lost time from seasonal unemployment of construction workers—possibly from encouragement of off-season work by annual wage agreements, possibly through some mechanism for seasonal variation in wage rates and material prices, possibly through other means. It seems very likely that in the 5 years immediately after the war these conditions may be met somewhat better than in the past, but not yet sufficiently well to make new apartments available to any substantial number of industrial workers or persons of similar incomes.

Full development of apartment construction must be mainly in projects suitable for average-income workers, who cannot afford expensive commuting and who will ordinarily prefer to live fairly close to places of employment. It is thus tied directly to the cities' problem of salvaging their deteriorated areas, which for the most part are well located for housing use and would ordinarily provide large areas suitable for efficient and attractive housing developments. Maturity of this potentially important part of the private housing field is therefore not to be expected until substantial progress has been made in solving the exceedingly complex problems of urban rehabilitation.

PUBLIC HOUSING

Public housing will be discussed in part 3 of this series in somewhat more detail, with other types of public construction. It is expected to be at a very low rate during the final year of the war, with perhaps about 4,000 dwelling units started, and to reach an average level of about 50,000 units started per year during the 5 years following defeat of Japan.

ADDITIONS, ALTERATIONS, AND REPAIRS

There will be heavy demand for work on existing structures. Owners will want to obtain rooms in attics or other unfinished space, to add complete or partial baths, to replace obsolete plumbing, heating and wiring, in some cases to obtain additional space, and to make numerous other improvements. Owners of sound but old-fashioned apartments will want to modernize them. Both owners' funds and

[12] California, New Jersey, New York, and Virginia are the only States in which legislation has specifically permitted insurance companies to invest in ownership of rental housing, and the only States in which such investment has occurred (other than through foreclosure). Legislation has been enacted in Massachusetts, but has not yet gone into effect. In a number of other States such investment is not expressly forbidden, but its legality is regarded by some as not entirely clear. In the remaining States such investment is definitely illegal.

credit machinery will be available, and an average volume of $750,000,000 per year may be expected in alterations, modernization and improvements. In most cases, this work is likely to be postponed a few months until shortages of materials are relieved, but then will expand rapidly. It is expected to reach $800,000,000 during the second year after defeat of Japan, reach a peak of $850,000,000 the next year, and then fall off slowly as the accumulated demand is met.

It will be necessary for owners, whether occupants or landlords, to proceed with maintenance operations which have been curtailed during the war. This work—decorating, exterior painting and other protective treatment, nonemergency repairs postponed from the war period, and emergency repairs—is estimated at an average of about $40 annually per existing dwelling unit, or approximately $1,400,000,000 per year. Since it requires less materials proportionately than other types of work it will probably increase very rapidly, but will nevertheless be spread over a considerable period. Such maintenance work is expected to reach a peak of 1½ billion dollars in the first year after the end of the war, and then to fall off quite slowly.

Nonresidential-Building Situation

COMMERCIAL BUILDING

There will be a very large volume of commercial-building work—probably an average of $1,200,000,000 annually for the first 5 post-war years, and a peak of $1,350,000,000 during the third and also the fourth of those years. For comparison, the greatest previous peak at the same 1940 level of costs was $1,361,000,000 reached in 1929, and the greatest 5-year annual average was $1,242,000,000 maintained from 1926 through 1930.

Although very close to these earlier peak periods in total volume, post-war commercial construction will be quite different in its composition. New work will be little more than a third of the total, and will consist characteristically of much smaller projects. Much more important will be modernization and alterations, which will expand to an early peak in the second year following the end of the war, and then fall off somewhat slowly as new work reaches a sustained level.

New Construction

Additional commercial space will be needed, but under conditions bringing a different type of activity from that of the 1920's, and specifically with comparatively few of the multi-million-dollar projects of the type which commemorate the excesses of that period of commercial building.

Retail space will be needed because of general and local growth in population, changes in distribution methods, and obsolescence of existing buildings. In growing localities, neighborhood shopping facilities will be needed. This need will be acute wherever intensive housing development occurs in vacant or sparsely settled areas, which necessarily will be the areas used for most of the larger housing projects. To a noticeable degree these will be unified shopping centers with off-the-street parking space, of the type which began to attain prominence shortly before the war, and it is likely that many of these

will be built in conjunction with the larger promotional housing and village-type apartment projects.

Changed distribution methods will also bring about some construction. Food stores particularly will want additional building designed for so-called "supermarket" type of operation, to replace older quarters less suitable for this use. Department stores in the major cities will continue their shift toward outlying and suburban localities, with construction of additional branch stores. Little expansion of downtown department-store space may be expected except in those cities having permanent and substantial gains in population. There will, however, be continued replacement of obsolete nonfireproof buildings, although in the larger cities this process is already well advanced. Likewise, there will be construction of new commercial buildings, either company-owned or built on lease, for department store, dry goods, and apparel chains, to replace the unsatisfactory rented quarters occupied by some of their outlets.

There will be a wide variety of other commercial construction, but probably no individual projects comparable to the largest of those built before the depression. Overbuilding of office space has been so great that even now there are vacancies in prominent buildings in some cities, and except for war requirements there would be extensive vacancy in most of the larger cities. Therefore, some office-building construction may be expected in cities showing net growth after the war, and some elsewhere under special circumstances, but only a small fraction of former peaks. Firms needing store or office space for their own use are likely to be much more cautious than in the past regarding construction of additional stories for rental as offices. Obsolete buildings on high-value land will ordinarily be replaced, if at all, with comparatively cheap "taxpayer" type buildings, with stores at the street level and not more than a single floor of office space above.

The current shortage of hotel accommodations is largely temporary, resulting from wartime conditions. In some cities there is permanent need for additional hotel facilities and, in fact, a small volume is currently under construction. There will be some replacement of old-fashioned buildings by well-known hotels having established clienteles for which their buildings are no longer suitable, but the greater part of this replacement has already been carried out. There will also be gradual replacement of less prominent older hotels in many cities. In a few localities there is a potential market for additional luxury-grade hotels, primarily for residential rather than transient occupancy, and this will no doubt be supplied wherever the demand seems to be permanent. Uncritical building of elaborate hotels from considerations of civic prestige, or as an indefinitely expansible field for investment, will be curtailed by the disastrous financial record of the hotel business. Except for the largest cities, restoration of automobile travel will have an adverse effect on patronage, by diverting travelers to motor courts, especially since these are likely to increase in number and to improve as regards the average grade of accommodations offered.

Small buildings, although no longer the dominant pattern for neighborhood retailing, will be built containing one or a few stores suitable for almost any kind of business. The trend toward estab-

lishments for "drive-in" patronage by city motorists has been apparent for some years and is likely to be accelerated. Thus far, this has been most notable for restaurants and food stores, but it has already been extended to laundries and other service establishments. There will also be active construction of establishments, particularly motor courts, for tourists' patronage. Although "tourist cabins" in many parts of the country have often been little more than shacks, substantial and comfortable accommodations with private baths have already spread extensively since they were introduced in the Far West some 15 to 20 years ago. These are likely to make up a very large part of the new construction for motorists' occupancy. In addition, there will be new roadside restaurants, and fairly extensive replacement of gasoline stations in both urban and rural locations.

Modernization

In the commercial field, new construction will be exceeded by modernization for which an average volume of $750,000,000 per year is expected. Older office buildings, hotels, department stores, and smaller commercial buildings in cities of all sizes will require this treatment. Many such buildings are well located, structurally sound, fire-resistive, and in general well suited to their purposes, but at a serious competitive disadvantage because of inconvenient or inefficient room arrangement, obsolete plumbing, heating, and other mechanical equipment, poor arrangements for internal traffic, or unattractive appearance of public spaces such as entrance or lobby. Modernization of these buildings, for which the cost will be only a small fraction of the cost of new construction, will represent a real economic necessity to their owners. The cost of individual projects will in some cases be several hundred thousand dollars, and perhaps occasionally a million dollars or more, although ordinarily it will be much less.

All types of work will be included, but special emphasis will be on those using metals. The pre-war trend to installation of escalators for concentrated passenger movement of a few stories will certainly be resumed. Elevator machinery and controlling mechanisms will be replaced, in order to increase hourly passenger capacity and reduce maintenance; cabs, doors, and enclosures will be replaced to improve appearance. Heating facilities in large buildings will be modernized to save fuel. Modernization of lighting will be widespread and will be accompanied by replacement of wiring not meeting modern standards. In some buildings there will be augmentation of plumbing installations. Installation of air-conditioning systems in retail establishments of all types, in amusement buildings, and in certain public parts of hotels will be extensive.

Nonmechanical work will be largely that affecting appearance and, in retail establishments, the display of goods and internal traffic. It will be concentrated on exteriors, show windows, entrances, and wall treatment for lobbies and other public spaces. Where room arrangement is poor or room sizes inefficient, partitions will be moved.

For smaller store buildings the need will be principally for refurbishing with new lighting, new store fronts and entrances, in some cases new finish floors or building exteriors, and other work bringing modernization of appearance. A great number of these smaller establishments will likewise install air-conditioning systems or, perhaps more

commonly, air-cooling systems without the humidity-control feature of true air conditioning. A special commercial group will be the establishments intended for patronage by highway users—gasoline stations, restaurants, motor courts, etc.—whose owners will be anxious to prepare them for restored traffic volume as soon as relaxation of restrictions permits.

An appreciable volume of commercial alteration and modernization work will be carried out by those chain stores which operate principally in downtown and other high-rental locations. To an increasing degree these companies have adopted their own standardized store designs, which not only identify their outlets but also meet the special requirements of their methods of operation. This results in some alteration work at all times, for opening of new units and changes of location. In addition, however, a number of these firms contemplate modernization of their exteriors and other distinctive features in accordance with trends in retail operations and in commercial architecture since their designs were originally adopted. It is also likely that standard designs will be adopted by additional companies.

In general, financing of commercial construction and modernization of the types mentioned should present no difficulties. The new construction and modernization will provide special advantages to the occupants, and in most cases the space provided will be rentable without difficulty to other tenants should occasion for such action arise. The chain stores and other firms wishing to rent specially constructed new buildings in general will be regarded as a preferred group of tenants with financial stability much above that of retailers as a whole. The cost level of building work, and the price levels for various materials, will of course affect volume and in specific modernization projects will affect the extent of the work. Relatively high land prices in good commercial locations and the high rent levels which such locations can support mean, however, that building costs are less important than for residential construction.

INDUSTRIAL CONSTRUCTION

Industrial construction will be needed, but the extent of the need is more uncertain than for other types. On the basis of available information, an average volume of $690,000,000 annually is estimated for the first 5 post-war years. It is expected that new construction will rise to a peak of $550,000,000 in work started during the fifth year, with an annual average of $440,000,000 for the period, and that additions, alterations, and modernization will reach a maximum level of $300,000,000 started per year during the second and third years, with a 5-year average of $250,000,000 per year. The volume of work for which architects or engineers have already been engaged is still small, but near the end of 1944 was about 6 times as great as at the beginning of the year. Further acceleration in the rate of preparation seems likely.

Private industrial construction was within or somewhat below the range of 500 million to 700 million dollars annually from 1921 through 1928, but this period was preceded by a peak of 967 million dollars in 1920 and followed by a secondary peak of 942 million dollars in 1929. No such rapid expansion, with the peak reached so soon after the end of the war, seems likely. The greatest period of industrial construction in the history of the United States is nearing its end, but there is ex-

tensive doubt about the peacetime usefulness of many plants which have been constructed. Some are suitable only for the manufacture of products for which peacetime demand will probably be small; some were built in isolated localities for military reasons, and are badly situated for civilian use; some are so large and so closely fitted to a specific pattern of operations that it is doubtful whether they can be used efficiently for post-war manufacturing. The remaining plants are presumably suitable for post-war production, but the availability of the large number built with Government funds will not be known until policies for their disposal are adopted. Until such policies are announced, many decisions on private industrial construction will remain tentative. Quite understandably there is a tendency to reticence on the part of many firms having concrete plans for new post-war products, with accompanying plans for necessary construction.

Even so, volume is likely to be substantial. There are indications of expansion in the food and textile fields. Geographical shift is likely for some industries. Expansion of paper making and other wood-pulp industries in the South is almost certain, because of the rapid growth rate of suitable trees. Some expansion of metal-using industries above pre-war level is also likely in the South, and rather considerable expansion in the Far West. Aluminum fabrication may expand in the Northwest, but this development is dependent on conditions beyond local control. Other geographical expansions are likely, to varying degree; in general, it seems likely that there will be an appreciable growth of manufacturing in the less-industrialized regions of the country.

In addition, there will be many expansions for which war-built plants cannot be used. Some new products, particularly chemicals, require highly specialized facilities which cannot be obtained economically by conversion of existing structures. In some cases expansion or the addition of specific facilities to existing plants will be needed to bring balance between different parts for post-war production. Another somewhat similar type of need, is that for replacement at existing plants of obsolete and unsatisfactory buildings, particularly older buildings which are no longer suitable for newer products and improved production methods. There is at all times a certain amount of alteration and addition to industrial plants as a whole, and this will certainly be increased substantially by preparations for post-war competition.

Financing is of primary importance, and will present widely varying problems to individual firms. Some have liquid assets sufficient for their contemplated capital expenditures, and those which have issued good securities to the public in the past or which make products well known to the general public will probably have little difficulty in marketing any necessary securities. There are definite indications, however, that firms without existing underwriting connections and not recognized by the general public will have serious difficulty in obtaining funds for plant expansion. This will be the case especially for those requiring specialized structures which cannot be used readily for the manufacture of other products.

OTHER PRIVATE BUILDING CONSTRUCTION

Other private nonfarm building construction will be largely that of nonprofit organizations—churches, schools and colleges, hospitals, and so forth. For all of these, the primary questions are availability of construction funds and ability to assume responsibility for maintenance and operation of the new facilities. Conditions for fund raising are more favorable than they have been for 15 years, and are expected to continue so. As a result, organizations of most of these types throughout the country are in differing stages of preparation for contemplated post-war construction. This work is unlikely to increase greatly from its reduced wartime level until Japan is defeated, except that church buildings seem likely to be started in fair volume during the final year of war against Japan only. Thereafter the entire group will expand rapidly, to an annual average of about $380,000,000 during the ensuing 5 years.

Articles in the architectural magazines and reports from other sources indicate a larger volume of religious buildings at the stage of plan preparation than for many years. A compilation of the tentative building schedule of more than 15 major denominations indicates a probable 5-year average of $155,000,000 for all religious groups. Some of this is for new church buildings, some for replacement of temporary or outworn buildings, some for additions to existing buildings including those left unfinished when first built, with the intention of completion at a later date, and some for improvements and modernization.

Private-school work is also reaching the stage of architectural design. A considerable part of this is for endowed or church-sponsored colleges, some for church-sponsored lower schools, and a certain amount for academies and other schools operated as business enterprises.

Preliminary tabulation of a questionnaire circulated by a committee of the American Hospital Association among member and nonmember hospitals indicated the likelihood of an extensive program of hospital construction. The report issued to date is provisional, but supports other indications. The increasing use of hospital facilities for conditions once treated at home is facilitated by widespread adoption of the "Blue Cross" hospital-insurance plans operated jointly by the hospitals themselves, which tends to smooth out occupancy and at the same time alleviate the great operating problem of collection losses. It is estimated that average annual volume will be about $75,000,000 for construction alone.

Since most of the nonpublic hospital space is provided by nonprofit organizations, the question of whether funds can be raised is important. The preliminary report of the Hospital Association's committee indicated fairly widespread concern regarding this particular problem on the part of hospital officials, and also indicated some wish for Federal grants. However, the favorable conditions for fund raising by other nonprofit organizations will apply to hospitals also, and should permit the volume estimated.

The construction work will include additions as well as new buildings, but comparatively little alteration and modernization work. The purpose of the latter obviously must be that of making the hospital plant more suitable for its specialized and highly technical

functions, which is sometimes exceedingly difficult. Lack of balance can often be overcome by addition of specific facilities, and localized faults in arrangement overcome by alterations, but more general shortcomings are not ordinarily subject to such correction. Where buildings are not fire-resistive or were designed without appreciation of the requirements of efficient operation, the improvement to be obtained through alterations will commonly not be worth the cost. The modernization project likely to be most widely carried out will be installation of air conditioning for operating rooms, delivery rooms, preparation rooms, and in some cases, nurseries.

Institutional care for the able-bodied aged and, except for rather brief periods, for dependent children is now generally regarded as obsolete, and existing facilities in many localities are more than adequate by current standards. Future construction is likely to be small.

There will be an expansion of construction by those nonprofit recreational and cultural agencies which conduct their activities largely in central buildings. The best known of these are the Y. M. C. A. and Y. W. C. A., but this group includes other federated organizations and a great number of strictly local organizations. Preliminary architectural steps have been taken in numerous cases, and some progress has been made in raising funds. The program will consist largely of replacement and modernization of existing buildings. Because of the financial burden of maintaining and operating additional space, new construction other than for replacement is expected to be concentrated on facilities which will increase membership and thus increase operating income, and on buildings in areas where the agencies have been poorly developed in the past. There will also be some construction of buildings of fraternal organizations, but this will probably be limited by the foreclosures during the depression on property of even some of the best-known lodges.

PUBLIC-UTILITY SITUATION

The estimates in the utility field are based primarily on past records of construction expenditures, in conjunction with such additional information as could be obtained from trade associations and the headquarters offices of national utility companies. No attempt was made to canvass the individual operating companies. Post-war plans are still rather uncertain in this field, although it includes companies long noted for their careful planning of capital expenditure programs. There has been extensive study of possible improvement programs and fair progress in planning specific projects, but for the most part final decisions on the scale of expenditures remain to be made. Furthermore, in some cases decisions between alternative ways of accomplishing a given purpose will probably be postponed until the post-war period, especially in the communications field. This will permit comparison of the various tentative plans on the basis of current cost levels, and in the light of the latest technical developments which might affect the decisions.

Subject to these qualifications, it is expected that average volume of utility construction started in the first 5 post-war years will be about $1,140,000,000.

A substantial part of utility construction at any time consists of extension of distribution facilities to additional customers. Another

substantial part consists of improvements to the general plant, in most cases individually rather small, to bring it into better balance with the load upon it. Some large projects are contemplated, but utility construction as a whole is not synonymous with large undertakings.

For the most part, financing will not be a serious problem. The earning record in most parts of the field has been good, and a fairly large volume of refunding to obtain lower interest rates has occurred within recent months. In the weakest part of the general field, that of railroads, a number of companies enjoy high credit and some have improved their credit by debt reduction from wartime earnings, but others will have great difficulty in borrowing money for construction purposes. Most of the last group, although their long-time financial condition is poor, will have on hand depreciation and other reserves which can be used for minor construction work.

RAILROADS

Railroad construction is estimated at an average of $360,000,000 per year, made up for the most part of fairly small jobs. Most of this will be nonbuilding work carried out on the roadway, on bridges, and on signal and other communication and control facilities. Its purpose will be to facilitate operation, correct causes of delay or congestion, improve safety, and reduce maintenance costs. There may be some replacement of outgrown smaller stations and probably will be some degree of modernization of other stations, in accordance with recent trends in design. Replacement of obsolete stations is needed in a number of cities, including some of the largest metropolitan centers. Those familiar with the field believe that the larger projects will not be undertaken until a later period. It is very likely that there will be some construction of shops and service pits especially designed for Diesel locomotives and other new-type equipment, but this work will be a small part of the construction program.

LOCAL TRANSIT

There is every indication of a large capital improvement program for local transit systems, but in most localities this will consist almost exclusively of purchase of new busses and streetcars, and construction will be limited principally to shops, garages, and other supplementary facilities. No instances are known in which major extensions of car tracks are contemplated. It is likely, however, that there will be cases of major track reconstruction or relocation in conjunction with improvement of principal urban traffic routes, to fit the streetcar routes into the master traffic plans being carried out. There will also be fairly extensive overhead construction for trolley busses in a number of localities, but this type of work is relatively minor in proportion to mileage provided.

The only major construction projects in prospect are in New York and Chicago, where the work will be financed with public funds. The program of the New York City Planning Commission includes capital expenditures of somewhat over $125,000,000 for local transportation, of which roughly $100,000,000 is for construction. Although city appropriations for this program are some $65,000,000

to date, execution as proposed is dependent on Federal grants of about $45,000,000 as well as on additional city appropriations. It is therefore uncertain how much of this program will be carried out. The construction work contemplated consists of miscellaneous improvements to present plant, a number of connecting links to join portions of the city-owned subway and elevated system, and one major extension to that system. The Chicago program is completion of the initial part of the west-side subway which had been under construction as a PWA project until work was stopped by the war. Subways have been proposed or are under discussion in several other cities, but it seems somewhat unlikely that any of these will be started within the period covered by the estimate.

COMMUNICATIONS

A large construction program in the communications field is scheduled, estimated tentatively at an average of $350,000,000 per year for the first 5 years after the war. Because of the highly technical nature of the field, the active program of engineering development in progress at all times, and the many assumptions which must be made regarding future technical and economic conditions, plans of the major companies are undergoing continued study. The upward trend in public use is shown by the fact that, at their lowest depression point in 1933, long-distance telephone conversations were only a quarter in number below their 1930 peak, and in 1937 exceeded this previous peak. This trend will be stimulated to some degree by new types of service in the post-war period. The consolidation of the telegraph companies which occurred late in 1943 will result in ultimate integration of physical facilities, and may be expected to accelerate the program of capital improvements.

Additional message capacity, service to additional users, and facilities for new types of service will be obtained in part by additional equipment and in part by construction, of which the largest single element is likely to be overhead and underground cable lines. Although buildings of several types will be needed, they will constitute a minor part of total construction.

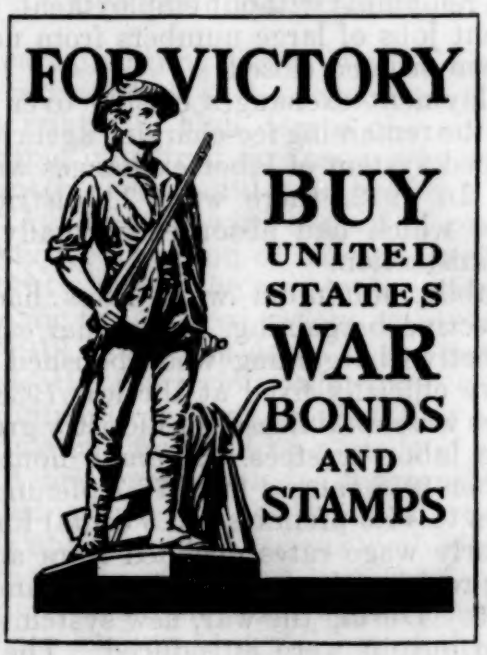
GAS, ELECTRIC SERVICE, AND PIPELINES

No compilations are available on proposed construction by gas companies, but there are indications that it will be fairly substantial. A considerable part of the new residential building will be on sites already having gas service, but much of it will not be. In addition, gas service will be wanted for some war-built housing projects now using bottled gas. Where there is retained population growth or increase in industrial use, the additional consumption will in some cases necessitate additional generating and storage facilities, and additional capacity for the mains. Construction cost of this work is estimated at $75,000,000 per year.

Electric light and power expansion was at its highest level during the 8 years from 1923 through 1930. During each of these years construction exceeded $400,000,000 and during 3 of the years it exceeded $500,000,000 for the private utility companies alone. Construction has declined since 1941, being limited by scarcities of the

critical materials needed. After the war there will be need for service to new areas and growing areas, as well as increased service to older areas with increasing levels of consumption, and some replacement of obsolete plant. The extent to which additional generating plant will be needed is not known. Recently, current consumption has declined somewhat from its earlier wartime peak, but the long-range trend is consistently upward. In the absence of more concrete information, volume is estimated at $300,000,000 per year.

Pipeline construction is estimated at only about $25,000,000 per year, in the absence of other information. This would consist primarily of extensions to existing lines, and construction of collecting lines in oil- or gas-producing areas. Financial success of the "big inch" line has been so very much greater than was expected that it would seem to presage construction of other interregional lines, but this may not be the case. Continuous operation at full capacity will be considerably more difficult to maintain than under wartime controls, and a larger fleet of tankers than ever before will be available. Consequently, no lines of this type have been included in the estimate.



Labor Conditions in Germany [1]

Summary

GERMANY is a highly developed industrial country, but agriculture also occupies an important place in the nation's economy. The country's shift in 1933 from a democratic to a totalitarian regime brought radical changes which resulted in the complete suppression of all labor organizations and free labor activities. In 1933, some 32,000,000 persons were gainfully occupied within the boundaries of the Reich; more than 12,000,000 of these were engaged in industry and over 9,000,000 in agriculture (including forestry and fishing). In the later 1930's, the number of gainfully occupied persons increased greatly. Unemployment was quite acute in the early part of that decade, reaching a peak of 5,575,000 in 1932. Under the Nazis, it was gradually eliminated, largely as a result of the great expansion in preparation for war. The increased demands for manpower during the war were met by the large-scale employment of foreign workers and prisoners of war, estimated at nearly 8,700,000 in January 1944. The manpower pool was further increased by the total mobilization of those groups still remaining without employment, in addition to the transfer to armament jobs of large numbers from nonessential enterprises which had been ordered closed.

Free public employment exchanges existed over a long period of years, and, in 1931, the remaining fee-charging agencies were abolished. This highly developed system of labor exchanges was taken over by the Nazi regime. In 1942, there were 23 district and 468 local employment offices, which had absorbed virtually all functions of wartime labor administration.

Under the Republic, minimum wage rates had generally been established by collective bargaining, but actual earnings frequently were higher. Collective bargaining was abolished under the Nazis and wage rates were officially fixed at the low 1933 level. In 1938, ceilings in wage rates were established for industry groups or individual plants through the labor trustees. Average hourly wage rates in industry in December 1938 ranged from 78.7 pfennigs (18.7 cents) for skilled male workers to 44.0 pfennigs (10.5 cents) for unskilled female workers. Real hourly wage rates declined from an index of 109 in 1931 to 93 in 1941; real hourly earnings for the same years rose from 102 to a peak of 105. During the war, new systems of incentive payments for increased output were introduced. The 8-hour day with overtime paid for at higher rates was generally observed in industry. In the late thirties, hours of work were extended and by the fall of 1944 had been uniformly fixed at a minimum of 60 hours per week.

Under the Republic, labor organizations had played a highly important role in Germany's economic and political life. Their total membership in 1931 was nearly 7,000,000, organized in different federations. Under the Nazi regime, all trade-unions were abolished and were replaced by the totalitarian Labor Front,[2] sponsored and controlled by the State. Industrial relations under the Republic

[1] Prepared in the Bureau's Editorial and Research Division by John P. Umbach.

[2] For an account of the Labor Front and its activities, see Monthly Labor Review, November 1944 (p. 932).

were based on an extensive system of collective bargaining, supplemented by Government machinery for conciliation and arbitration, works councils, and labor courts. Under the Nazis, the various agencies for the regulation of labor relations were either abolished or transformed into instruments of the totalitarian State. Collective bargaining was replaced by regulation from above, through regional labor trustees.

Germany was among the first of the industrial countries to adopt a comprehensive system of social insurance, which provided protection for virtually all wage earners and salaried employees in case of sickness, old age, and invalidity, unemployment, and industrial accident, and granted pensions to widows and orphans.

Germany's highly developed cooperative movement was strongly supported by the labor unions but was also extensively utilized by the farming population. In 1933, the two main organizations of consumers' cooperatives alone had a membership of nearly 4,000,000. Although opposed to the consumers' cooperatives, the Nazis did not finally liquidate them until 1941, when the seizure of their extensive resources was completed.

Economic Background

During the 70 years preceding World War II, Germany's comparative wealth in natural resources, such as coal, iron, potash, and bauxite, accompanied by a relatively high degree of scientific and technical progress, led to a rapid industrial expansion which changed Germany from a predominantly agricultural country to a highly developed industrial nation. Agriculture, with the aid of protective legislation and a more intensified cultivation of the soil, greatly expanded and retained an important place in the country's national economy.

Germany's economic life suffered serious setbacks as a result of the military defeat in 1918, the break-down of the currency in 1923, and the effects of the world depression following 1929. These adverse conditions, while contributing to the downfall of the Republic, were nevertheless overcome and followed by periods of economic recovery. The factors which at different times aided substantially in the recovery process included such policies as the maximal utilization of foreign credits, an intensive application of various methods of rationalization, as well as an increasing trend toward cartelization. More recently, under the Nazi regime, economic recovery has been largely the result of totalitarian policies leading to a shifting of the risks of planning and control from private to public authority. Under this policy, long before the outbreak of actual hostilities, the country's entire resources were gradually converted from peacetime production to an economic program ultimately designed to furnish the materials of war.

Industrial Distribution of Population

The population of the German Reich in 1939, according to the census in May of that year, was 69,622,483. The territory included in the German Reich was that set by the Versailles Treaty of 1919, plus the Saar which was annexed as the result of the plebiscite of 1935. It did not include Austria (population 7,009,014) or the Sudetenland of Czechoslovakia (population 2,945,261). With these added, the

"Greater Reich" had a population of 79,576,758, in 1939. The gainfully occupied portion of this population in May 1939 was reported to number 39,368,000.

The available reports of the 1939 census do not include data on the industrial distribution of the gainfully occupied portion of the population. The latest information on this subject is that contained in the 1933 census. At that time the total number of persons gainfully occupied [3] was reported as 32,296,074 (not including the Saar). These were distributed by occupational status and by major industrial groups as shown in table 1.

The term "industry" as used in the German census covers mining, manufacturing, and the mechanical trades, such as construction. These have been regrouped in table 1 according to the International Labor Office classification. Industry proper, therefore, included more than 12 million of the 32 million gainfully occupied persons in Germany in 1933. An appreciable proportion of those in "industry" were independent handicraftsmen and artisans. Agriculture continued to be quite important.

TABLE 1.—*Industrial Distribution of Gainfully Occupied Persons in Germany, 1933*[1]

Industry group	Total	Employers and independent workers	Salaried employees	Wage earners	Unpaid family workers
All industry groups	32,296,074	5,302,916	5,513,137	16,167,905	5,312,116
Agriculture, forestry, fishing	9,342,785	2,181,292	114,622	2,530,650	4,516,221
Mining	702,095	1,210	44,932	655,830	123
Industry	12,350,887	1,515,723	1,278,499	9,283,611	273,054
Commerce and transport	5,932,069	1,256,240	2,332,698	1,848,167	494,964
Public administration, national defense, and liberal professions	2,698,656	348,451	1,723,946	598,505	27,754
Domestic service	1,269,582	(2)	18,440	1,251,142	(2)

[1] Data are from International Labor Office, Yearbook of Labor Statistics, 1942.
[2] Figures not available or not applicable.

As a result of the vastly expanded war activities, the number of gainfully occupied persons increased greatly in the later 1930's. At the same time there was an equally great increase in the military services; and, with the coming of war, use was made, on a huge scale, of war prisoners and of workers from the conquered territories. As noted elsewhere in this report, these foreign workers in Germany in January 1944 had reached a total of 8 to 9 millions.

Employment Conditions

PRE-WAR SITUATION, 1929–39

The trend in employment in Germany [4] from 1929 to July 1939 may be shown by the employment index, which is based on 1929 as 100. A downward trend in employment continued until 1932, when

[3] The term "gainfully occupied" includes all persons normally with gainful occupations, whether employed or unemployed at the time of the census.
[4] Not including Austria and the Sudetenland.

the index for wage earners dropped as low as 59.5 and then rose rapidly until in July 1939 it reached 125.1, or 25 percent higher than in 1929. The index for salaried employees dropped more slowly and also rose more slowly. During the early part of the period, total hours worked, as the result of reduced working time, declined still more rapidly than employment; it also rose more rapidly in the later years because of longer working hours.

From 1933 to 1939 the major increases in employment occurred in the heavy industries, amounting to 292.5 percent in building construction, 191.9 percent in the machinery industry, 142.2 percent in electrical engineering, and 132.9 percent in iron and metal production. The increases were much less marked in the consumer-goods industries, such as food and clothing.

Unemployment.—In 1932–33, when the world depression was at its worst, unemployment was more acute in Germany than in any other major industrial country and undoubtedly was largely responsible for the success of the Nazi Party in gaining control of the Government. Hitler made a major appeal primarily to unemployed youth.

According to statistics compiled by the employment exchanges, the number of registered unemployed in 1929 was 1,898,604, or 9.3 percent of the country's industrial labor force. The number of registered unemployed increased in 1932 to 5,575,492, or 30.1 percent of the total working population. In 1933 there was a slight reduction in these figures and thereafter a very sharp reduction, until by July 1939 the registered unemployed numbered only 38,379, or 0.2 percent of the working population. A large part of the decrease in the number of persons reported as unemployed immediately following the Nazi Party's accession to power in 1933 was due to manipulation of the statistics. For instance, in its early days the Nazi Government took the position that women's place was in the home. Employment of married women was discouraged and even forbidden, and married women were not counted as in the labor market. This eliminated many thousands of names from the registers of the exchanges. Various new forms of relief work also were created by the Nazi Government, but persons with relief-work jobs were no longer counted as unemployed. By these and other means, statistics of the German unemployed were sharply reduced, although in a great many cases there was no change in the real situation.

However, very shortly after seizing control of the State, the Nazis began preparations for the military strengthening of the country. Most of these activities, for a long period, were carried on in secrecy (as in the manufacture of certain armaments) or were in forms which did not betray their military significance (as in the building of a vast system of motor highways which were ostensibly undertaken merely as relief-work measures). As a result, all industries, especially the heavy industries, were greatly stimulated, so that by the year the war began, 1939, unemployment was practically eliminated.

WARTIME SITUATION

Even prior to the formal outbreak of war in 1939, a condition of labor shortage, caused by the greatly increased demands of Germany's

rearmament program, existed in most industries. After the beginning of actual warfare the demands for labor became so insistent that it was necessary to draw on all possible sources of new labor supply. Most important among these were workers from the occupied territories and certain neutral countries. In addition to these civilian foreign workers, a great proportion of whom were conscripted, large numbers of prisoners of war were utilized as labor in both agriculture and industry.

Following the Stalingrad debacle, the drive for manpower led to a decree of January 1943, which required men between 16 and 65 and women between 17 and 45—with certain exemptions—to register with their local employment offices. This new mobilization was said to have supplied about 2,000,000 workers in 1943, mainly from among the aged, youth, married women, and those hitherto considered unfit for labor, including cripples and tubercular persons. Most of these new workers were women and part-time workers, and they were used primarily to fill gaps in relatively unimportant work caused by transfers of the more efficient to armament jobs. In furtherance of the new mobilization program three decrees were issued which provided for the closing (as of March 15, 1943) of hotels, restaurants, cafes, and night clubs, commercial enterprises, and artisan and small-scale industrial plants, deemed unnecessary to the war effort.

Labor conscription.—Compulsory labor was introduced as early as June 1938 by a decree which authorized employment offices to conscript wage earners, independent workers, and employers for work or for training for a job. However, the number of Germans engaged in compulsory labor remained relatively small, at least until 1943. After the devastating effects of the air raids had rapidly increased the need for emergency housing, conscripted workers were increasingly employed for such work.

Total mobilization.—Following the attempt on Hitler's life in July 1944, more drastic measures for total mobilization were decreed. The age limit for the compulsory registration of women for war work was advanced from 45 to 50 years. As a final measure, a decree issued by Himmler in February 1945 ordered the conscription of all women and girls between the ages of 16 and 60 for auxiliary work with the Volkssturm. The decree empowered local gauleiters to assign the women conscripts to other types of work.

Numerous activities in the spheres of education, entertainment, and administration were greatly restricted if not entirely suspended, including those of architects, painters, sculptors, advertising draftsmen, designers, and art dealers. By an order of the Reich Minister of Economics, all commercial firms were divided into two categories—those essential to the war effort (and thus entitled to retain a part of their manpower) and the nonessential (whose manpower could be dispensed with). To the latter group belonged shops dealing in toys, flowers, perfumes, jewelry, stamps, rugs, sports goods, furs, and musical instruments. Great efforts were also made to reduce the manpower needed in larger plants by improving their efficiency through increased mechanization and rationalization.

The part-time employment of youth was increased considerably by a decree of December 1943, which authorized the Hitler Youth organizations to direct their members to war work after school or after regular working hours. A decree of January 1944 deprived boys and girls leaving school of the right to choose a vocation, by directing them to jobs in which they could be of greatest use in the war.

Germany's numerous and varied efforts to mobilize its manpower for war have resulted only in a small net increase in the total civilian labor force, which has been estimated to be about 2 percent above the aggregate number of workers employed before the war. The various mobilization measures have, therefore, largely served to maintain an essential labor force by replacing the men called into military service with foreign workers, war prisoners, women, and old, young, and disabled persons.

Employment of foreign workers.—In the earlier stages of the war, non-German workers transferred to Germany were primarily made up of war prisoners and of civilians seized with the military forces during the invasions. The drives to recruit foreign civilians as workers for Germany at first were carried out with a minimum of compulsion through local labor-control agencies. However, when the existing sources of manpower supply proved to be increasingly inadequate, especially in view of the alarming increase in military losses, methods of coercion or compulsion were increasingly applied to expand the non-German labor supply. The methods for recruitment varied according to the nationality, race, or political views of those subjected, ranging from economic inducement, applied in the so-called Nordic countries, to outright seizure of civilians in the occupied eastern territories. Since the fall of 1941 compulsory methods have generally been applied in the recruiting of foreign workers. As a result, the majority of such workers employed in the summer of 1944 were labor conscripts.

The numbers of civilian foreign workers and employed prisoners of war, increased rapidly and, by January 1944, had risen to a total of 8.7 million (table 2).

Almost half of the foreign workers transferred to Germany were put to work in agriculture and related industries, principally on the large estates of eastern Germany. Many of the women were at first employed as domestic servants, but were later forced to become workers in armament factories. The foreign workers employed in war industries, on construction projects, and at maintenance work were sent in largest numbers to western Germany, while many of the German workers were shifted eastward to areas comparatively free from air raids.

The Nazi authorities have always attempted to maintain a semblance of voluntary contractual relations by signing contracts with foreign workers, early in the war, for 6 months, later extending them to a year, and still later for the duration of the war.

TABLE 2.—*Foreign Labor Employed in Germany at Various Dates, October 1940–January 1944* [1]

Territory of origin	Number of foreign workers (in thousands)						
	October 1940	April 1, 1941	September 25, 1941	Spring of 1942	August 1942	Beginning of 1943	January 1944
Total foreign labor employed in Germany [2]	2,200	2,800	3,640	4,100	5,100	6,550	8,671
Civilian workers [2]	[3] 1,100	1,500	2,140	[3] 2,500	3,500	4,800	6,450
Employed war prisoners [4]	[3] 1,100	1,300	[3] 1,500	1,600	1,600	1,750	2,221
Poland:							
Civilian workers	340	873	1,007.6	1,000	1,100	1,300	[5] 1,400
Employed war prisoners	[6] 540	[6] 80	[6] 80	[6] 80	[6] 77	[6] 56	[6] 56
Denmark: Civilian workers	25	31	28.9	30	40	48	23
Norway: Civilian workers	(7)	1.4	(7)	2	2	2	2
Netherlands: Civilian workers	80–90	90	93	170	210	300	350
Belgium:							
Civilian workers	70	87	121.5	215	220	300	500
Employed war prisoners	(7)	[6] 80	[6] 80	[6] 77	[6] 77	[6] 77	30
France:							
Civilian workers	-------	25	48.6	150	190	400	[8] 1,100
Employed war prisoners	500	1,250	1,250	1,200	1,200	1,150	[9] 870
Yugoslavia:							
Civilian workers	(7)	48	108.8	200	200	250	(7)
Employed war prisoners	(7)	(7)	[6] 180	[6] 165	[6] 149	[6] 133	95
Croatia: Civilian workers	(7)	(7)	(7)	(7)	(7)	(7)	200
Serbia: Civilian workers	(7)	(7)	(7)	(7)	(7)	(7)	70
Greece: Civilian workers	(7)	0.5	(7)	8	34	34	20
Soviet Union:							
Civilian workers	(7)	10	(7)	(7)	1,200	1,500	2,000
Employed war prisoners	(7)	(7)	(7)	300	300	500	1,000
Lithuania: Civilian workers	(7)	(7)	(7)	(7)	(7)	(7)	90
Latvia: Civilian workers	(7)	(7)	(7)	(7)	(7)	(7)	90
Estonia: Civilian workers	(7)	(7)	(7)	(7)	(7)	(7)	15
Czechoslovakia:							
Bohemia-Moravia (Protectorate): Civilian workers	107	150	140.1	200	200	200	230
Slovakia: Civilian workers	80	69	80	120	120	120	[10] 118
Italy:							
Civilian workers	90	132	271.7	300	350	350	180
Employed war prisoners	-------	-------	-------	-------	-------	-------	170
Hungary: Civilian workers	(7)	21	35	35	29	(7)	25
Bulgaria: Civilian workers	(7)	8	14.6	15	15	15	35
Rumania: Civilian workers	(7)	4	[11] 189.9	(7)	4	4	6
Spain: Civilian workers	(7)	1.1		10	9	9	8
Switzerland: Civilian workers	(7)	17		20	18	18	18
Sweden: Civilian workers	(7)	1.2		(7)	1	1	0
Finland: Civilian workers	(7)	0.2		2	1	1	0
Portugal: Civilian workers	(7)	0.1		(7)	(7)	(7)	(7)

[1] Data are from International Labor Review (Montreal), October 1944; and Displacement of Population in Europe, by Eugene M. Kulischer (International Labor Office), 1943.
[2] Before January 1944, not the sum of items shown for each column, by country.
[3] Total from independent source (not the sum of items shown).
[4] The total employed war prisoners shown for October 1940—January 1943 are smaller than the totals for each column, as figures given for war prisoners for Poland, Belgium, and Yugoslavia include officers, who, in accordance with the Geneva Convention concerning the employment of prisoners of war, were not ordinarily put to work.
[5] Excluding Ukrainian workers from Eastern Galicia, but including workers from the General Government and the incorporated Polish Provinces, as well as liberated Polish prisoners of war working under contract.
[6] Total number of prisoners including those not actually employed.
[7] Data not available.
[8] Including 250,000 prisoners of war, converted into "free workers."
[9] Excluding 250,000 prisoners of war, converted into "free workers."
[10] Including 18,000 Volksdeutsche (i. e., persons classed as belonging to the German community) from Slovakia.
[11] This figure is a total for all countries for which separate figures are not given above, and covers more than the countries bracketed together (Reichsarbeitsblatt, 5, Dec. 1941, No. 34, Pt. V, p. 610).

Employment Agencies

A comprehensive system of free public employment exchanges was built up in Germany over a long period of years. In 1927 it was made a part of the Reich Institute for Employment Exchanges and Unemployment Insurance, under the supervision of the Reich Minister of Labor. Private agencies not run for profit were also put under

the supervision of the Reich Institute, which was to provide for collaboration between the private nonprofit agencies and the public exchanges. In 1931 private fee-charging agencies were abolished.

Just before the fall of the Republic in 1933, the system of public employment exchanges included a central office, 13 district offices, and 361 local offices.

In carrying on its activities, the service emphasized the close connection between placement and vocational guidance. Vocational guidance, indeed, came to be entirely in the hands of the employment exchanges which worked in close cooperation with the schools and the social-welfare offices.

The Reich Institute for Employment Exchanges and Unemployment Insurance had equal numbers of representatives of employers, employees, and the public authorities on its governing body and its management committee. Employers and workers were also represented in the same proportion in the State and local labor offices, as well as in the other functions of the Institute.

The Nazi Government took over this highly developed employment exchange system from the Republic. It abolished the joint labor-management committees which functioned at various levels, but left the Reich Institute with about the same nominal functions as before. Actually, however, with the increasing use of compulsory labor and labor controls in Germany, the employment-exchange system was converted into an agency for administering and enforcing the labor-control policies of the Government.

In 1939, the Reich Institute for Employment Exchanges and Unemployment Insurance was incorporated in the Reich Ministry of Labor, and the system of labor exchanges was placed under the regional labor trustees. With the incorporation of new territories into the Reich, new districts and labor offices were established, increasing the total number in 1942 to 23 district and 468 local labor offices. Virtually all functions of labor administration created during the war, including compulsory registration, conscription, allocation, and the more recent efforts for total mobilization, are centralized in the local labor offices, which are now under the direction and supervision of the Commissioner-General for Manpower.

Wages and Earnings

Methods of wage fixing.—Wage and other labor policies in Germany under the Republic were based upon the principles established in the Weimar Constitution of 1919. Wages in general were established through collective bargaining between the employers' association and the trade-unions in the various industries. Agreements covered all phases of labor relations and after being legalized by the Government became applicable to the whole industry. In case of lack of agreement between the parties, the Government could resort to what amounted to compulsory arbitration. The wages established were minimum rates. Actual earnings often were higher as a result of overtime payments, premium systems, etc. Under this system the organization of labor was encouraged.

When the Nazi Party came into power in 1933, existing trade-unions and all collective-bargaining processes were abolished. The

new policy was to maintain wage rates at former levels, and minimum-wage rates were established at the 1933 level. During the following years, however, the greatly increasing industrial activity caused employers to engage in competitive wage bidding in order to obtain or keep competent workers. In 1938 the Government stepped in and, through the labor trustees, established ceilings in wage rates, at first for industries or groups of plants and later for individual establishments.

General level of wages.—The principal unit of German currency is the reichsmark, which consists of 100 pfennigs. Prior to the abandonment of the gold standard in the early 1930's by both Germany and the United States, the par value of the German reichsmark was 23.8 cents. Later, with the institution of controlled currencies by both countries, the exchange value of the mark rose to about 40 cents, but this increase was apparently an incident of "controlled" exchange and did not reflect any change in its purchasing power within Germany. Therefore, for lack of a better method of measurement, the old par value of the mark (23.8 cents) has been used herein.

According to an official report, the average hourly wage rates in German industry in December 1938 ranged from 78.7 pfennigs (18.7 cents) for skilled male workers to 44.0 pfennigs (10.5 cents) for unskilled female workers.

Of the industries reported, the brewery industry had the highest wage rates (105.2 pfennigs per hour for skilled males) and the silk textile industry the lowest (58.2 pfennigs per hour for skilled men workers).

TREND OF WAGES 1929–42

Wage rates under the German Republic reached an average of 85.3 pfennigs per hour in 1929 for a large group of industries (table 3). Actual hourly earnings of 96.8 pfennigs, because of overtime work, etc., were somewhat higher than the wage rates. Weekly earnings at that time averaged 31.19 reichsmarks.

TABLE 3.—*Trend of Wage Rates and Earnings in Germany, Selected Years 1929–42* [1]

Year	Hourly wage rate [3]	Hourly earnings [3]	Weekly earnings [4]	Index (1929=100) of real wage rate and earnings [2]			Cost-of-living index (1929=100)
				Hourly wage rate [3]	Hourly earnings [3]	Weekly earnings [4]	
	Pfennigs	*Pfennigs*	*Reichsmarks*				
1929	85.3	96.8	31.19	100	100	100	100
1931	82.3	86.9	27.73	109	102	101	88
1933	67.6	70.7	21.88	104	95	92	77
1935	67.5	73.6	24.04	99	95	96	80
1937	67.6	76.4	26.52	98	97	105	81
1938	67.9	78.9	27.84	97	100	109	82
1939	68.2	81.2	(5)	98	102	(5)	82
1940	68.2	83.9	(5)	95	103	(5)	84
1941	68.9	87.5	(5)	93	105	(5)	86
1942	69.3	(5)	(5)	92	(5)	(5)	(5)

[1] Data are from International Labor Office, Yearbook of Labor Statistics, 1942, and International Labor Review (Montreal), August 1944 (p. 260).
[2] Index of money wages and earnings divided by index of cost of living. (Slight discrepancies in this table are due to faults in the original material.)
[3] Mining, industry, and transportation.
[4] Agriculture, industry, transportation, and commerce.
[5] Data are not available.

As the result of the industrial depression, money wage rates by 1933, when the Nazis took over, averaged 67.6 pfennigs per hour. Actual hourly earnings, as a result of reduction in overtime pay, etc., averaged 70.7 pfennigs, and weekly earnings, for the same reason, had dropped to 21.88 reichsmarks.

From 1933 to 1938, as the result of the Nazi efforts to stabilize wages, money wage rates remained almost stationary, being 67.9 pfennigs in 1938 as against 67.6 pfennigs in 1933. However, as a result of longer hours of work and various "incentive" payments, actual hourly earnings rose from 70.7 pfennigs per hour in 1933 to 78.9 in 1938, and actual weekly earnings from 21.88 to 27.84 reichsmarks.

"Real" hourly earnings (money wages measured in purchasing power) in 1938 were the same as they had been in 1929, while weekly earnings were 9 percent higher. After 1938 "real" hourly earnings increased and in 1941 were 5 percent higher than in 1938.

WAGES IN VARIOUS INDUSTRIES

Average hourly wage rates for various industry groups for December 1938, as published by the German Statistical Office, are shown in table 4.

Wage rates, as well as working hours in industry, were established in many employments through collective agreements.

TABLE 4.—*Average Hourly Wage Rates in German Industries, by Sex and Skill, December 1938*

Industry group	Average hourly wage rate				
	Male workers			Female workers	
	Skilled	Semi-skilled	Unskilled	Skilled	Unskilled
	Pfennigs	*Pfennigs*	*Pfennigs*	*Pfennigs*	*Pfennigs*
All industries	78.7	68.6	62.2	51.5	44.0
Production-goods industries	83.4	----	63.5	----	----
Building construction	81.7	----	65.6	----	----
Chemicals	87.1	70.1	----	----	46.9
Coal mining:					
Bituminous coal	95.5	----	59.9	----	----
Lignite	75.8	71.0	67.4	----	----
Metalworking	79.0	71.7	62.4	----	46.5
Paper production	75.9	----	57.3	----	38.6
Paper products	92.9	83.8	69.0	52.7	43.0
Printing	96.1	----	79.7	----	48.8
Woodworking	79.4	66.7	61.0	----	----
Consumption-goods industries	73.0	----	60.7	----	----
Breweries	105.2	----	93.2	----	59.6
Ceramics	70.9	----	58.9	43.4	36.1
Clothing	74.1	----	----	47.9	----
Confectionery	80.7	----	68.9	----	46.4
Shoes	79.2	79.2	----	59.9	----
Textiles	63.6	63.6	53.1	50.0	39.5
Cloth weaving	61.3	61.3	54.2	51.9	41.3
Cotton goods	63.3	63.3	52.2	51.8	39.4
Knitted goods	64.2	64.2	53.1	44.3	38.4
Lace weaving	75.4	75.4	55.9	----	39.3
Linen goods	59.6	59.6	49.6	45.6	36.8
Ribbon weaving	65.3	65.3	54.4	51.1	42.0
Silk weaving	58.2	58.2	54.4	51.3	41.9
Velvet weaving	71.9	71.9	61.6	53.7	40.9
Worsted spinning	69.8	69.8	54.4	45.0	39.2
Transportation and communication	82.0	71.5	67.7	----	----
State railways	82.7	71.5	68.4	----	----
Post office	77.7	71.3	63.9	----	----

The basic 8-hour day was quite general, with 10 hours as the customary maximum and with overtime paid for at higher rates according to varying schedules for different industries. After the Nazis came to power, the existing practices regarding working hours continued for a considerable period before the hours of work were increased. Official reports regarding actual hours of work in German industry up to 1938 show that hours actually worked in all industry averaged 7.67 in 1929, 6.91 in 1932, 7.68 in 1937, and 7.69 in 1938. For individual heavy industries, however, the average ran much higher, being, for instance, 8.39 hours in engineering construction in 1938. The consumer industries had shorter hours, averaging only 6.86 per day in textiles in 1938. With increasing labor shortage in the late thirties working hours were extended, and in the Hours of Labor Code of 1938 the extension of daily hours beyond 10 was officially sanctioned. As a result, and as the labor shortage became more acute, hours of labor were often greatly increased, being in some cases officially reported as high as 15 or 16 per day. When these very long hours finally proved unproductive, measures were taken by the Government to prevent such excesses.

Wages in the metal industry, 1938.—The German metal industry includes the production of iron and steel, smelters and rolling mills, the manufacture of machinery, apparatus, and vehicles, the electrical industry, and the manufacture of optical and precision instruments.

The wage scales in effect in the Berlin-Brandenburg district were fairly typical of the industry as a whole. The minimum hourly rates for adult male workers in 1938 were 93 pfennigs for highly skilled workers, 82 pfennigs for skilled, 72 pfennigs for semiskilled, and 66 pfennigs for unskilled workers. Women received 70 percent of the rates for men. Piece work was paid on a scale at least 15 percent higher than the ordinary hourly wage rate, but actual piecework earnings were 40 to 60 percent higher. The regular workweek in the industry was 48 hours, with overtime work paid for at 15 percent above regular rates.

In Silesia the wage scales fixed by an agreement of December 1932 were still in force in 1938. Hourly wage rates prevailing in the different districts of Silesia are shown in table 5.

Piece-work earnings in Silesia were generally 25 to 30 percent higher than time rates, and specially skilled workers could earn as much as 50 to 60 percent above the minimum time rate.

TABLE 5.—*Hourly Wage Rates in the Metal Industries of Silesia, by Sex and Skill, 1938*

Wage district	Industry	Male workers			Female workers
		Skilled workers	Semi-skilled workers	Unskilled workers	
		Pfennigs	*Pfennigs*	*Pfennigs*	*Pfennigs*
Upper Silesia	High blast furnaces, steel and iron mills, rolling and wire mills	55.0	.....	39.0	27.0
	Allied power plants	63.0	.....	43.0	29.0
Lower Silesia	Foundries, enamel-plate plants	59.0	53.0	46.0	33.0
Breslau	Construction of machinery, railway cars, motors	66.5	59.5	53.0	37.5
Brieg	Foundries, machine factories	63.0	53.0	47.0	33.0
Grünberg	Construction of machinery, railway cars, bridge, iron and steel material	64.0	57.0	51.5	35.5
Glatz	Foundries and machine shops	60.0	53.5	47.0	.....
Neisse, Ratibor	Brewery and distillery machinery	64.0	55.5	47.5	29.0
Goerlitz	Gold and silverware and other fine metals	67.0	59.0	49.0	37.0
Lower Silesia	Construction of machines and railway cars	66.5	60.0	53.0	36.5

The hourly wage rates in the Rhenish-Westphalian iron and steel industry in 1938 were 79.3 pfennigs for blast-furnace and coke workers, 85.3 for Martin-steel workers, and 79.5–90.5 for rolling-mill workers. In addition, a family allowance was paid to married workers amounting to 1 pfennig per hour, and 2 pfennigs per hour for each dependent child. Actual earnings of skilled workers were considerably in excess of the rates fixed. In the Siegerland iron and steel industry, which produced chiefly sheet steel and tin plate, the hourly rates in 1938 ranged from 35 pfennigs for female workers to 59 pfennigs for skilled male workers. All workers also received family allowances of 1 pfennig per hour for the wife and for each dependent child.

Wages in the chemical industry, 1938.—The chemical industry (including, in addition to chemical plants proper, plants in the mineral-oil, rubber, and synthetic-products branches) is one of the ranking industries of Germany, owing in large measure to the large-scale manufacture of synthetic raw materials as substitutes for imported raw materials. The hourly wage rates in the industry in the summer of 1938 were 72 pfennigs for skilled workers, 70 pfennigs for semi-skilled, and 68 pfennigs for unskilled workers. Actual weekly earnings averaged 34.56 reichsmarks for skilled workers, 33.60 for semi-skilled, and 32.64 for unskilled workers. A payment of 15 percent above the hourly wage was made for piece work. Additional compensation was provided for dangerous and unhealthful work.

Wages in bituminous-coal mining, 1938.—The basic wage rates in the bituminous-coal industry in Silesia ranged from 4.00 reichsmarks per shift for unskilled surface workers to 5.80 reichsmarks for coal cutters. Piece-work rates provided earnings at least 10 percent above the time rates. Actual earnings were considerably higher than the basic wage rates in the middle of 1938, averaging 7.18 reichsmarks per 7½-hour shift for underground work. In the Ruhr district, because of the higher standard of living, miners' wages were generally from 5 to 10 percent higher than in Silesia. Agreements also provided for family allowances and free coal.

Wages in building construction, 1938.—The minimum hourly wage rates for workers in the construction industry in Greater Berlin in 1938 are shown below. In provincial towns the rates were slightly lower.

	Reichsmarks per hour
Masons	1.08
Carpenters	1.08
Concrete workers, skilled	1.08
Stone and mortar carriers	1.08
Concrete molders	1.08
Scaffold workers	.96
Mortar mixers; concrete and water carriers	.96
Concrete workers, unskilled	.96
Elevator and hoist operators	.96
Unclassified workers	.90
Foundation and subsurface foremen	.90
Foundation and subsurface workers	.72
Machinists, first class	1.13
Machinists, second class	1.08
Machinists, third class	.95
Locksmiths, fitters, smiths, welders, and acetylene-torch cutters	1.08
Assistant fitters, painters, plaster workers, pipe fitters	.90
Pipe layers	1.01
Pile-driver operators	.90

For dangerous and dirty work, an average of 15 percent above the regular rate was paid, and for work at dangerous heights (10 meters above ground), 15 percent above, plus 5 percent for every 10 meters higher.

The Berlin wage scale made no provision for piece-work rates. The Reich wage order of 1936, however, established a so-called piece-work wage, which is equivalent to the regular hourly wage plus 20 percent.

The normal workweek in the industry was 48 hours for regular workers, 72 hours for watchmen, and 60 hours for teamsters and cooks on building lots. The customary time for "second" breakfast, lunch, and afternoon coffee was considered working time.

Overtime was paid for at 20 percent above the normal rates. Time and a half was paid for Sunday and ordinary holiday work and double time for four specified holidays.

FACTORS AFFECTING WAGES

Deductions from wages.—Largely because of the comprehensive social-insurance system, deductions from wages and salaries for taxes and contributions were quite large, even before the Nazi regime. Thus in January 1933, the deductions constituted from 15.0 to 20.6 percent of wages, and from 17.3 to 20.0 percent of salaries.

Under the Nazi Government these official deductions were increased. It has been reliably reported that in August 1942 total deductions were as high as 30 percent in the case of the higher-paid workers. In addition, there is evidence that workers were expected to make contributions to various Party causes.

An order of October 1941 provided for additional withholdings from wages, under a system of compulsory savings which are deposited in accounts blocked for the duration.

Supplements to wages.—The regular wages of workers in Germany were supplemented by the provision of family allowances, paid vacations, and a system of social insurance.

The payment of family allowances to workers with wives and children existed to a limited extent in Germany before the first World War. The system, an entirely private arrangement on the part of certain groups of employers, was extended in the early 1920's and continued under the Nazis. In 1938 such allowances were paid in establishments in the bituminous-coal, boot-and-shoe, iron-and-steel, shipbuilding, and other industries in certain districts.

The Nazi Government greatly expanded the idea of family allowances by introducing a general system of child endowment. In the decree of December 9, 1940, it was provided that a monthly allowance of 10 reichsmarks should be paid to all German heads of families residing in the "Greater Reich" who had at least 3 children (legitimate or illegitimate) under 21 years of age. Jews were excluded from the benefits of the system. The nationals of other countries could receive the allowances if the appropriate administrative authorities consented.

Workers who were compelled to live apart from their families were granted separation allowances of 8 reichsmarks per week.

Vacations with pay.—Vacations with pay for adult workers have never been required by law in Germany. However, as in the United States, many individual establishments gave paid vacations and

many collective agreements under the Republic provided for them. The practice continued to grow under the Nazi Government. It is reported that about 90 percent of the collective provisions in force in 1937 fixed the minimum vacation at 6 working days per year, with a usual maximum of 12 days.

In the case of young persons under 18 years of age, the Nazi Youth Protective Act required that annual vacations be granted—15 days for those under 16 and 12 days for those over 16. Wartime regulations regarding vacations with pay were reported, in February 1944, to provide for 17 days a year after 6 months of employment in the same plant, with 4.70 reichsmarks pay per day. As a part of the measures for total mobilization of August 1944, a general order was issued prohibiting all holidays and vacations.

Social-insurance benefits.—Legislation regarding social insurance provided benefits for sickness, old age, and invalidity, and compensation in case of unemployment and industrial accidents (see page 518). Special systems provided similar benefits for miners and employees in public employment, including the Reich Railways and the Post Office.

WAGES DURING THE WAR

With the increase in industrial activities incident to the preparation for war and with the actual coming of war in 1939, no change occurred in the general Nazi policy of stabilizing money wage rates while encouraging actual earnings to increase. The following devices were used for this purpose: The lengthening of working hours; transfers of workers to higher-wage categories; and new systems of incentive payments for increased output. A general reform of the entire German wage structure, with attempts to introduce piece rates as far as feasible in industry and agriculture, has been in progress since 1942.

Under a scheme of "efficiency wages," controlled by the labor trustees and the Labor Front, workers were classified into eight grades, supplanting the customary categories of skilled, semiskilled, and unskilled. In the building and metal industries, in which efficiency wages were first introduced, a different basic wage rate applied to time workers in each grade, the average time rates ranging from 75 percent for simplest performance to 133 percent for the most highly skilled grade of work; grade 5, ordinarily skilled work, forms the basis (100). Piece rates in each grade were revised, with averages 15 percent above those of time rates. The efficiency-wage system restricted women's wages to 75 percent of the time rates of men. Under the new wage plan as operated in the building industry in 1943, each worker was given a number evaluating his efficiency. The earnings of any particular group of workers were assessed on a group basis and then distributed according to this index, resulting in penalties for lower-than-average output and higher wages for output above average. In addition to assuring time workers in the more skilled grades earnings above those of piece-rate workers in lesser grades, the new scheme led to a maximal utilization of workers' skills, which in turn resulted in increased production. Although it cannot be reliably stated to what extent efficiency wages have been applied, there are indications that, in addition to the building and metal industries which now use the new wage scheme in the majority of their larger and medium-sized plants, the coal and textile industries introduced incentive wages in some of their enterprises.

As shown in table 6, the index of hourly money earnings between 1939 and 1943 rose 9.9 percent. During the same period, weekly earnings showed an increase of 12.3 percent, while increases of only 0.7 percent are shown for hourly real earnings and 3.1 percent for weekly real earnings. The increase in the cost-of-living index amounted to 8.5 percent.

These official indexes are derived from official prices and rates. They do not take into account purchases of goods of higher price than usually bought, because of the disappearance of lower-priced goods from the market, or necessaries bought on the black market.

TABLE 6.—*Trend of Earnings in Germany During Wartime (1939–March 1943)* [1]

Year	Indexes (1936=100) of—				
	Money earnings		Real earnings		Cost of living
	Per hour	Per week	Per hour	Per week	
1939	108.6	112.6	107.2	111.1	101.8
1940	111.2	116.0	106.4	111.0	104.5
1941	116.4	123.6	109.2	116.0	106.6
1942	118.2	124.3	108.6	114.2	108.9
1943 (March)	119.3	126.5	108.0	114.5	110.5

[1] Data are from Wirtschaft und Statistik (Berlin), as reported by Neue Zürcher Zeitung (Zürich), May 18, 1944.

Wage stabilization.—From the outset, a cardinal factor in wartime economic policy of the Nazi regime was that of wage stabilization. Although the control of prices (especially for consumer goods) was not neglected, certain price increases occurred. In 1943, the Government's policy for stabilizing wage rates was modified to allow minor increases in hourly wage rates in certain industries. In most cases, however, only comparatively small groups of workers were affected, and the increases in average wage rates were also small. The largest reported increase in 1943 over 1942 wage rates (4.8 pfennigs per hour) was that for skilled workers in the woodworking industry of East Prussia.

Wartime wage supplements.—Earnings of an increasingly large number of workers in Germany were supplemented over extended periods by allowances for separation from their families as a result of evacuation or transfer to jobs in other localities. In the building industry the percentage of workers receiving transfer allowances is reported to be about 40 percent. Various kinds of bonuses in cash or in the form of additional insurance, extra rations, free meals, or vitamins were granted by employers. Although such unauthorized wage supplements were finally prohibited, these wage-control evasions still continue. Proposals for a general increase in German wages have been repeatedly discussed but so far have failed to materialize, evidently for fear that the rigidly maintained stability of the reichsmark might be upset and the imminence of inflation be disclosed to the people.

Hours of Labor and Overtime During the War

Official German reports covering average hours of work for all industries up to March 1942 show only minor increases, reporting

49.2 hours per week for that month. Other reliable reports covering the war period indicate, however, that hours of labor since 1939 were greatly extended. In most war industries workers appear to have worked 60 hours a week and in some instances even longer. Salaried employees as a rule worked 54 hours per week. The peacetime practice of compensating overtime beyond 48 hours at a rate of 25 percent extra, and 50 percent extra for night and Sunday work, was continued during the war. In 1944, working time in many armament factories reached 12 hours a day when not worked in shifts. Under the total mobilization effort of August 1944, working hours in public administration and in offices in industry and trade were fixed uniformly at a minimum of 60 hours per week, and this regulation was gradually extended to all other types of work previously operating on a 48-hour-week schedule.

Wages and Hours of Foreign Workers

Prior to 1944 the Nazi policy as to wages, hours, and general working conditions was based upon a differentiation between workers from western and eastern countries. While the latter were regarded and treated as inferiors, receiving wages far below levels of those paid to German workers and subject to greater restrictions regarding working hours, Sunday and holiday work, housing, and food than Germans, the western workers in theory were accorded the same treatment as German workers and credited with German wages. Actually, however, the western workers received lower wages, partly as a result of deductions made for the workers' dependents at home. In addition, the dependents frequently did not receive the full value of the deductions, as the latter were made in German currency while payments to dependents were made in the currencies of the workers' respective countries, thus sharply reducing the amounts actually paid, as a result of German control of the exchange rates of the occupied countries, which favored the German currency. In 1944 the daily rates of pay for employed prisoners of war were 40 pfennigs for Russian prisoners, 70 pfennigs for Polish prisoners, and 90 pfennigs for those of other nationalities.[5] For work on emergency squads repairing air-raid damages the daily pay was fixed at 30 pfennigs for Russian prisoners and 60 pfennigs for Polish prisoners.

Labor Organizations

Under the Empire and to a greater degree still more under the Republic, labor unions played an extremely important role in Germany not only in the labor field as such, but also in the broader spheres of economic and social life. The German trade-unions were organized in three major groups, holding different social philosophies, but generally acted in close cooperation. These groups were the Free (Social-Democratic) Trade Unions, the Christian National Unions, and the Democratic Unions. These groups were made up of federations in which wage earners and salaried employees were organized separately. In 1931, the total membership of all labor organizations was officially reported at nearly 7,000,000. The Free Trade Unions were by far

[5] 100 pfennigs equal 1 reichsmark, which for lack of a better method of measurement, has been quoted for conversion purposes at 23.8 cents (see p. 506).

the most important, having a membership of more than 4,000,000 in 1931. About 1,000,000 civil servants, or more than four-fifths of those organized were members of the independent Federation of Civil Servants Unions, which was not affiliated with any of the three major groups. Organized salaried employees were almost equally represented in the three separate groups. In 1931, less than 3 percent of all organized wage earners were members of independent or company unions, and less than 1 percent belonged to Communist, Syndicalist, or Anarchist unions. The Free Trade Unions worked closely with the Social-Democratic Party, the largest and most important political organization under the Republic. They were liberal in principle and worked for the achievement of economic and social aims through legislative processes while unyielding in opposition to revolutionary methods.

The main function of the trade-unions, particularly under the Republic, was to develop, in conjunction with the employer associations in the various industries and trades, collective agreements covering such vital matters as wages, hours of labor, and other conditions of employment. An act of February 4, 1920, created works councils to represent the interests of the workers in the various establishments. The workers in each establishment elected the council's members. In the first election of works councils the Free Labor Unions obtained the majority of votes almost everywhere. The works councils elected labor representatives to the labor courts, arbitration boards, sick-benefit funds, etc.

The labor unions also established many benefit systems for their members. Some of these supplemented the benefits provided by the national social-insurance schemes. Others were to take care of emergencies not provided for by social insurance.

German Labor Front.—After the Nazis came to power in 1933, they at once proceeded to liquidate the Free Trade Unions, arrested their leaders, and confiscated all funds and properties. The remaining unions were at first coordinated into one labor organization, which, after further organizational changes was finally replaced by the German Labor Front, a gigantic structure including all wage earners, salaried employees, independent workers, and employers. The Labor Front was contemplated in the Law Concerning the Regulation of National Labor of January 1934, and its organization and powers were defined in a decree of October 1934 (18 months after its inception), as "the organization of German workers of brain and brawn." In a decree of 1935, the Labor Front was defined as a Nazi organization, affiliated to the Nazi Party. At the outbreak of World War II, the Labor Front included 20,000,000 individual members in Germany proper and, in addition, almost 3,000,000 in Austria, Sudetenland, Danzig, and the western Polish territories, which had been incorporated into "Greater Germany." Virtually all nonagricultural gainfully occupied persons with the exception of civil servants and members of the professions, belonging to their own associations, are members of the Labor Front. Certain separate organizations, such as the National Food Estate, comprising all persons engaged in agriculture, and the National Socialist Teachers' Association, have corporate membership in the Labor Front, adding about 7,000,000 to its total.

The huge membership of the Labor Front is controlled by the "Leader of the Labor Front," through an extensive administrative mechanism having a network of offices in 41 districts, 807 counties, and some 27,000 local areas. Below the local level there are further subdivisions by enterprises, and in the larger plants cells and blocks. The principal functions of the Labor Front, in addition to that of keeping industrial peace, include the indoctrination of the masses of workers with the Nazi philosophy and other propaganda and educational work, the promotion of welfare work within plants, and the direction of a variety of important economic enterprises in housing, banking, insurance, and other fields, such as the People's Car Works and the People's Tractor Works.[6]

Prior to the present war, the "Strength through Joy" branch of the Labor Front organized recreational, athletic, and educational activities for workers on an increasingly large scale. During the war, the movement was reorganized and its functions were closely related with the war effort. Foremost among its wartime activities are the promotion of greater efficiency through vocational training and contests, the management of workers' camps, and the organization of almost all recreational activities in the armed forces.

Plan for reconstruction of German trade-union movement.—A tentative plan for the reconstruction of the German labor movement after the war was adopted by a conference held at Stockholm, in February 1944, in which 27 German trade-union delegates participated, in addition to representatives of the trade-union movement of Sweden and the United States and of the Refugee Committee. This plan provided, first, for the dissolution of the Labor Front and then for the organization, as rapidly as possible, of a new trade-union movement, including the workmen and salaried employees who have been enlisted compulsorily in the Labor Front. The relief claims of the workmen upon the former trade-unions and the Labor Front would, however, be maintained.

The plan proposed that in every factory and locality, election of union representatives take place immediately, these to constitute themselves the administrative body of that union. Immediate election also of provisional factory councils would be held in order to unite workers and salaried employees in the various establishments and plants and to secure their democratic right to vote. The final organization of the trade-unions by industries or professions will be determined by the trade-union congresses of the German workmen themselves.

The plan presupposed the political independence of the trade-union movement, but urged that they have a voice in governmental economic policy, especially during the reconstruction period. The planning and control of the food supply was especially indicated during this crucial stage.

In February 1945, an American Labor Adviser to the Allied Control Commission for Germany was appointed, whose task will be to assist in the reorganization of the German labor movement.

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[6] For an extended discussion of the Labor Front, see Monthly Labor Review, November 1944 (p. 932).

Industrial Relations

MACHINERY FOR INDUSTRIAL PEACE

Collective agreements.—Collective bargaining between trade-unions and employers' organizations was the widely accepted method of establishing wages and certain other working conditions in Germany for many years prior to the advent of the Nazis, except in certain fields such as domestic service and homework.

Collective agreements reached in part of an industry were, if legalized by the Government, applicable to an entire industry.

The latest published statistics on collective agreements under the Republic were for January 1931. At that time 7,259 such contracts were in effect, covering 10,059,985 wage earners, and 1,858 covering 1,890,255 salaried employees. The coverage was greatest in the metal and machine industry, the textile industries, the building trades, and agriculture.

Conciliation and arbitration.—Under the German Republic, public conciliation and arbitration was provided by law to supplement joint industrial machinery for the settlement of disputes between employers and employees as provided in collective agreements. The conciliation and arbitration machinery, first established by an act of 1916, was reorganized in October 1923 so as to restrict its jurisdiction to disputes arising from negotiations of new agreements. Conciliation committees established by the Federal conciliators and the Minister of Labor were the public agencies for conciliation and arbitration. On these committees there was equal employer and employee representation, with a Government representative serving as chairman.

If either of the disputing parties rejected an award made by an arbitration committee, promulgation of a special governmental decree was necessary to make the committee's award binding. Statistics regarding collective agreements show that by far the largest proportion of official arbitration proceedings were initiated by unions. In 1930, sixty percent of the 5,529 agreements were reached through negotiation, 32.1 percent required official compulsory arbitration, and 7.8 percent resulted from arbitration by committees provided for in collective agreements.

Works councils.—Under the Republic, an important feature in German labor relations was the extensive system of works councils, based on the Works Council Act of 1920, which required the election of such bodies for wage earners and salaried employees in all establishments employing 20 or more workers; smaller places of work (5 to 19 workers) elected works chairmen. German workers were thus granted a share in formulating factory rules; also a voice in certain phases of plant administration, such as the observance of collective agreements, factory rules, and protective labor laws. In case of dismissals protests could be brought before the council. Generally speaking, the German works-council system, although a new experience for both workers and employers, functioned fairly satisfactorily and contributed much to improvement in plant operation and to the promotion of stability in labor-management relationship.

Under the Nazis, the works councils were replaced by so-called councils of trust, provided for in the Law for the Regulation of National Labor of 1934. Nominated by the employer and the Labor Front

representative in the plant, the council members were "elected," although no other nominees could be entered. The status and functions of the councils of trust, which are under the chairmanship of the employer, can scarcely be compared with those of the works councils of the democratic era. The councils of trust were concerned with promoting the Nazi "community spirit" within the plant, often by appealing to the workers' honor. In addition to the consultative functions in matters relating to safety and factory rules, the councils of trust later served to promote larger production. Since 1936, the members of councils of trust have been appointed by the labor trustees, while their functions were gradually absorbed by the plant stewards of the Labor Front.

Labor courts.—By an act of 1926, the German labor-relations machinery was extended by the establishment of Federal labor courts on a local and regional basis, with a Supreme Labor Court (at Leipzig) to function as the highest authority of review. Workers' and employers' organizations were represented equally on the labor courts, which were presided over by professional judges. The jurisdictions of the labor courts covered disputes between workers and an employer, controversies between parties to collective agreements, and differences between employers and works councils.

Although the labor courts continued to function under the Nazi regime, their importance and judicial authority was greatly restricted by the establishment of local and regional advisory offices under the direction of the Labor Front, to give guidance to both workers and employers in matters regarding industrial relations. Before a dispute could be brought before a labor court, it had to be reviewed by an advisory office, which usually succeeded in reaching a settlement. Thus, the number of disputes handled by the labor courts declined substantially.

Social-honor courts.—Nazi philosophy was specifically applied to industrial relations through the Act for the Regulation of National Labor (1934) which provided for a system of social-honor courts, distinct from all regular judicial authorities and based upon Nazi concepts.

Violations by workers or employers against the spirit of the Nazi community within the plant were made subject to punishment up to 10,000 reichsmarks. These honor courts were used primarily during the earlier years of the regime against small employers accused of conduct which was contrary to Nazi principles. In the years prior to the war the activities of these courts declined and since the outbreak of the war have become insignificant.

Labor trustees.—After collective bargaining had been abolished in 1933, the Nazis organized a new instrumentality for the regulation of labor conditions by establishing the Office of Labor Trustees. Most significant among the functions of the Labor Trustee, who has absolute authority within his region in virtually all matters pertaining to labor, is the issuing of regulations regarding wages and other conditions of work which are binding on all industries within the respective region. Since the war, offices of the labor exchanges have been combined with those of the Labor Trustees, who are now responsible for the administration of the exchanges. Under the Nazis, therefore, collective bargaining has been replaced by a system which is restricted to regulation from above, and which, since the war, has eliminated

even the limited consultative participation of representative groups originally provided for under the Nazis.

INDUSTRIAL DISPUTES

Prior to 1933, strikes and lockouts were a normal part of the "free economy" existing under the Republic and, in somewhat lesser degree, under the preceding Empire. Industrial disputes were numerous following the first World War, the largest number of strikes and lockouts (4,785) occurring in 1922; thereafter they declined in number to 648 in 1932.

Under the Nazi regime, strikes and lockouts were forbidden under extreme penalties and, as a result, none are reported to have occurred since 1933.

Social Insurance

Germany was among the first of the industrial countries to adopt a comprehensive system of social insurance, its beginnings dating back to the 1880's, when compulsory sickness insurance for workers was established. In 1933, the existing legislation provided insurance against sickness and unemployment, pensions for invalidity and old age, and for widows and orphans, as well as workmen's compensation for industrial accidents. In addition, there were separate systems for miners and Government employees.

In the following brief account of the several social-insurance systems in Germany, reference is made, for the most part, to conditions existing at the time the Nazi Government came into power in 1933. No fundamental changes in the various systems have occurred since then.

SICKNESS INSURANCE

Coverage.—Sickness insurance, first provided for industrial workers in 1883, was gradually extended to other groups of wage earners and salaried employees. According to provisions which were in effect in 1933, all employed persons, with the exception of salaried employees and craftsmen working at home whose remuneration was 3,600 or more reichsmarks a year, were required to insure. Persons whose annual income did not exceed 7,200 reichsmarks could insure voluntarily under the scheme.

Each of the territorial funds (local and rural) generally covers the same area as an insurance office. It includes all the insured persons in the area who do not belong to an occupational or substitute fund.

Occupational funds include works funds, guild funds, miners' funds, and seamen's funds. Works funds are established in enterprises employing not less than 150 persons liable to insurance (50 in agricultural undertakings). Special funds are created by guilds for the persons employed in establishments of guild members.

There are also special voluntary funds for postal employees, restricted to the lower salary grades.

In 1937 the average number of compulsorily insured persons was 22,357,000. About 9,500,000 were covered by voluntary insurance.

Contributions.—The revenue of the sickness-insurance funds is derived from the contributions of insured persons and their employers. Compulsorily insured persons formerly paid two-thirds

of the total contribution, and their employers one-third, but by the act of December 7, 1933, each pays half. Voluntarily insured persons pay the whole contribution themselves.

The rate of contribution and the basic wage on which it is to be calculated are fixed independently by each fund.

Benefits.—Regular sick benefits include medical attendance, medicine, and therapeutic appliances, from the first day of illness through a maximum period of 26 weeks; hospital treatment when the nature of the illness or the circumstances require it; and medical attendance for the members of the insured person's family. Additional benefits include nursing at the insured person's home, etc.; extension of the period of medical attendance to 1 year; aid for convalescents; artificial limbs, etc. In maternity cases provision is made for obstetrical attendance and, if necessary, medical attendance and hospital treatment for insured women and the wives and daughters of insured men.

The cash benefit amounts to 50 percent of the basic daily wage from the fourth day of sickness, for a period not exceeding 26 weeks from the beginning of the illness; if the head of a household is treated in a hospital, his family receives a home benefit equal to half his cash benefit.

Maternity benefits include a lump sum of 10 reichsmarks; a "maternity" benefit equal to the sick benefit in value (but not less than 0.50 reichsmark a day for 4 weeks before confinement and 6 weeks after it); and a nursing benefit, equal to half the "maternity" benefit (but not less than 0.25 reichsmark a day for 12 weeks after confinement).

The funeral benefit is equal to 20 times the basic daily wage.

In the Postal Service and the Railways the permanent officials continue to receive their salaries in case of sickness, the cost of providing substitutes for them falling upon the authorities. An official is pensioned if sickness lasts for a year.

Wartime adjustments.—Measures to adjust the insurance system to war conditions include maintenance of the rights of mobilized persons (including persons called up for anti-aircraft defense or belonging to the armed units of the police force or labor service) without contributions from the employers or the insured persons.

Wives and children of mobilized men, who are not themselves in insurable employment, retain their rights to sickness-insurance benefits, which include medical and obstetrical aid and at least half the cost of pharmaceutical aid, without payment of contributions. War widows and orphans are covered by this type of insurance by a decree of April 20, 1939.

The time limit for the receipt of medical service was abolished for insured persons and members of their families by a Ministry of Labor circular of May 20, 1941, which also provided that cash benefits can be extended beyond the statutory limits if the medical adviser of the fund considers it probable that the insured person will become fit for employment within a reasonable time. The time limit on family benefits was also abolished.

Certain limitations were placed on hospital treatment for members of insured persons' families, as the public hospitals are reserved for army requirements as far as possible.

INVALIDITY, OLD-AGE, AND WIDOWS' AND ORPHANS' INSURANCE

Coverage.—All manual workers in industry, commerce, transportation, handicrafts, agriculture, etc., including home workers, seamen, domestic servants, and apprentices, are required to be insured, irrespective of age, sex, and nationality.

Certain groups of persons may insure voluntarily (age limit, 40 years); the most important of these consists of small employers and heads of establishments regularly employing not more than two persons required to be insured.

The number of persons insured under invalidity, old-age, and widows' and orphans' insurance in 1937 was estimated at 18,100,000.

Contributions.—Financial resources are derived from the contributions of employers and insured persons and from Federal subsidies. Employers' and insured persons' contributions vary according to eight wage classes, being equal to 5 percent of the maximum wage in each class.

Benefits.—The benefits include invalidity and old-age pensions, widows', widowers', and orphans' pensions, and benefits in kind.

Invalidity and old-age pensions are paid in case of temporary or permanent invalidity or on attainment of the age of 65. In case of temporary invalidity, the pension is payable from the beginning of the 27th week. Pensions consist of the Federal supplement (72 reichsmarks a year) and a sum provided by the insurance institution. According to the act of December 7, 1933, pensions (assessed on or after January 1, 1934), are to consist only of the Federal subsidy (72 reichsmarks a year), which is considered as the basic amount, and an increment, paid by the insurance institution, of from 8 to 62 reichspfennigs, a year for each contribution-week, according to the rate of contribution paid. A bonus of 90 reichsmarks a year is payable for each child under 15 years of age.

Widows' pensions are payable to all insured persons' widows who are incapable of work or who have completed their sixty-fifth year.

The orphans' pension is equal to four-tenths of the invalidity pension to which the deceased insured person was or would have been entitled, plus a Federal subsidy of 36 reichsmarks a year; it is granted up to the end of the orphan's fifteenth year.

Wartime provisions.—The rights of persons called to the colors are automatically maintained throughout the periods of military or labor service, without payment of contributions. Rights to invalidity pensions run to the end of the calendar year following the close of the war. The qualifying period for invalidity or survivors' pension is waived in the case of persons incapacitated or killed during military service.

Special funds.—Separate funds for pension and invalidity insurance are maintained for miners (Federal Miners' Benefit Society); for salaried employees (Federal Insurance Institution), insurance being compulsory for all private employees with annual earnings of less than 7,200 reichsmarks; and for workers and salaried employees of the various Government services, who are likewise required to be insured.

UNEMPLOYMENT INSURANCE AND EMERGENCY RELIEF

Compulsory unemployment insurance, which came into force on October 1, 1927, has subsequently been amended a number of times.

Coverage.—Generally speaking, all workers, whatever their remuneration, and all salaried employees earning not more than 8,400 reichsmarks a year are liable to insurance; salaried employees earning more than that amount may continue to insure voluntarily. Certain groups of agricultural workers, apprentices, domestic employees, casual workers, persons engaged in most forms of temporary employment, and most homeworkers are, however, exempted.

Administration.—The Federal Institution for Employment Exchanges and Unemployment Insurance administers the scheme. In addition, it is responsible for the employment offices for workers and apprentices and collaborates in the campaign against unemployment.

Contributions.—Unemployment-insurance contributions are paid by employers and insured persons in equal shares. Since the scheme came into operation the rates have been fixed at a certain percentage of wages, uniform for the whole of Germany; this was originally 3 percent but has been increased on several occasions.

Benefits.—Benefits include unemployment payments; maintenance of contributions to sickness insurance for the unemployed and to invalidity, old-age, and widows' and orphans' insurance for the unemployed; and the short-time benefit.

Unemployment benefit is paid in case of involuntary unemployment to insured persons who have completed the qualifying period and are able and willing to work. A worker is regarded as having completed this period if, on claiming benefit for the first time, he has been in insurable employment for at least 52 weeks during the preceding 2 years, or if, on claiming benefit for the second time or subsequently, he has been in insurable employment for 26 weeks during the preceding year.

The amount of benefit is governed by the remuneration which the worker received during his last year of employment and by the cost of living in the locality where he resides.

The Federal Institution may order or approve the payment of the short-time benefit. A short-time worker is defined as one employed in an insurable occupation who during any week does not work the customary number of hours of his establishment, owing to shortage of work, and who consequently earns less wages. Benefit may be paid if the worker loses at least 3 working days in a calendar week or 6 in a calendar period of 2 weeks. By order of November 30, 1934, increased short-time benefit may be paid by industries that are obliged to cut down hours of work drastically, because of a shortage of raw materials.

Emergency relief.—Emergency relief was introduced under the act of November 19, 1926, and is now based on the Unemployment Insurance Act. Relief is not an insurance benefit but a special supplement for times of exceptional depression. It is paid to unemployed persons who have exhausted their right to unemployment benefit, provided they are capable of working, willing to work, involuntarily unemployed, and in need.

The entire cost is met out of the proceeds of a levy on wages.

The rates of unemployment benefit are taken as the maxima for emergency relief. Until November 2, 1930, emergency relief might be paid for a period not exceeding 39 weeks, or 52 weeks for unemployed persons over 40 years of age; since that date it may be paid for not more than 32 weeks, or 45 weeks for persons over 40 years.

WORKMEN'S COMPENSATION

Coverage.—An accident-insurance system for industrial workers was introduced in 1884 and subsequently extended to other occupational groups. In any State, the legislative authority may extend coverage to agricultural workers also. Since 1925 the scheme has also covered certain occupational diseases.

In 1937 the workers covered by industrial-accident insurance numbered 30,057,027.

Administration.—There are two types of institution for the administration of workmen's compensation: Accident associations (*Berufsgenossenschaften*) of establishments engaged in industry and agriculture; and special insurance institutions.

Industrial and agricultural accident associations are bodies for the joint coverage of risks to which enterprises employing insurable workers are obliged to belong. Some of them include all the establishments of a particular kind in the whole of Germany, others only those in a limited area. The Central Government and the States have their own insurance funds for their employees; self-insurance is also permitted to the communes, federations of communes, and other public bodies.

Contributions.—Workmen's compensation costs are borne solely by the employers, with few exceptions; assessments are made according to risk at the end of each year.

Benefits.—Benefits for incapacity resulting from accident include free medical attendance, including hospital treatment; free vocational rehabilitation (retraining and placement); and compensation, from the day of the accident, for the duration of incapacity. In cases of total disability, the victim is entitled to the full pension (two-thirds of his annual wages), and in case of partial disability to a proportion of such pension corresponding to the degree of incapacity. Benefits in case of death include a funeral benefit, equal to one-fifth of the victim's annual wages, but not less than 50 reichsmarks; and survivors' pensions payable from the day of death. The sum of all survivors' pensions may not exceed two-thirds of the worker's annual wages.

Benefits in case of occupational disease are the same as those for accident. Further, provision is made for a transitional pension, payable when there is reason to believe that a worker's continuation in his employment will cause an occupational disease to develop, recur, or grow worse. This allowance may not exceed half the full pension, and is payable as long as the worker refrains from employment at the place of his former work.

Cooperative Movement

In 1933, just before the seizure of power by Hitler and his National Socialists, there were in Germany 51,795 cooperative associations of various types. Eliminating those not usually regarded as part of the cooperative movement, such as cooperatives of private dealers, there were 49,941 cooperatives. The two largest groups were the credit associations (21,607) and the farmers' marketing and processing associations (18,821). Housing cooperatives (3,813) were an important form of activity and had been responsible for a large pro-

portion of the housing erected, especially in the cities. In Berlin 68.3 percent of the dwellings built in 1927 were built by cooperatives.

Consumers' cooperatives, although small in number (1,674) were a very important element in the economy of the country. Over 1,200 of these associations were affiliated with two central educational federations, each federation having its own wholesale association. The combined membership of these local associations in 1931 was 3,765,919, or about 6 percent of the total population. Counting members' families, these consumers' cooperatives were serving about 24 percent of the German people, but as their business was mainly in groceries, meat, and certain household supplies, they accounted for only about 5 percent of the total retail trade of Germany. The retail associations produced also a sizable amount of goods, especially perishable commodities such as meats, bakery goods, etc. Their wholesale associations were not only important in the field of wholesale distribution but were also manufacturers and substantial importers of foreign goods. Savings made through the cooperative enterprises were used to support various welfare activities—convalescent homes, vacation resorts, burial funds, etc.—as well as to extend patronage refunds to the members.

The enlightened business policies of the cooperatives and the loyalty of their members had enabled the cooperative movement to survive the terrible period of inflation and economic prostration of the early 1920's, and by 1928 they had exceeded their pre-war level. However, the long downhill slide in the economic activity of Germany that had begun shortly after the stabilization of the currency in 1923 continued with increasing velocity through 1931. The rising unemployment especially affected the cooperatives (whose membership was largely industrial); the closing of the banks in 1931 and the levying of additional business taxes also had a depressing effect on cooperative activity. Nevertheless, by the time of the advent of the Nazis, the cooperatives had again begun to show unmistakable signs of revival.

COOPERATION UNDER THE NAZIS

When the Nazis came into power, they either favored or ignored most types of cooperatives, but the consumers' cooperatives were one of the first objects of their enmity. They dissolved the five central consumers' cooperative organizations—the two central federations, their wholesales, and the central printing association. In their place was created a single association, not even containing in its name the word, "Cooperative." Members' voting rights were abolished, management was placed in the hands of Nazi appointees, and the whole cooperative system was incorporated into the Labor Front. At the same time, the movement was divided geographically into 11 regions, each with a commissioner having final authority.

However, the fact that the cooperative movement represented such a large segment of the population and was so intimately bound up with German economic life made it only prudent for the Nazis to close in upon it slowly. The Government itself stated that the consumers' cooperatives were "made up of the most substantial elements among the working classes," and a high official admitted that they had proved to be "financially and economically sound" and had "demonstrated

strong powers of resistance to the crisis." It was not until in 1935, therefore, that a law was passed, aimed at bringing about their total extinction, offering inducements for voluntary dissolution, preventing any further expansion of the movement, and singling out as "financially unsound" 82 large associations. These associations, which together accounted for 60 percent of the total share capital of the movement and about half of the total business, were compelled to dissolve. As a result of this 1935 law, the consumers' cooperative movement lost nearly 1½ million members and much productive plant. By 1937 the business of the local associations compulsorily affiliated to the Nazi-created wholesale had declined to less than half of their 1932 volume.

No statistics are available for the German cooperative movement after the war broke out. The cooperatives that still remained were, however, able to continue operation in some fashion until early in 1941. In February of that year a decree, covering consumers' cooperatives not only in Germany but also in former Austria and the Sudetenland of Czechoslovakia, transferred all their property to the Labor Front and directed that the retail cooperatives were to be turned over to private ownership. It was not until a year and a half later that this "reorganization" was complete, and even then the transfer to private ownership had not been carried out on any large scale. Further, apparently the system had enlarged rather than contracted. According to a report made September 29, 1944, only about 100 stores had been "transferred to independent dealers," over 900 had been "dispensed with," and the others were being operated (presumably by or under the auspices of the Labor Front) in a network called the DAF Gemeinschaftswerk. In Germany proper, this consisted of 135 "supply rings," 7 "multiple stores" with about 12,000 branches, 400 central and branch supply stores, 300 bakeries, 60 butchers' shops, and 200 other businesses, besides a number of productive plants. It was reported that the total business of the system in 1943 amounted to 1,200,000,000 reichsmarks, or over 100,000,000 reichsmarks more than the total cooperative retail business in 1932.

A "final report" on the reorganization, as of October 20, 1944, stated that "the restoration of private enterprise by transferring shops to retailers working on their own account cannot be carried out on a substantial scale before the end of the war. Front soldiers and the war-disabled will have priority for the transfer of shops." Evidently, what has really taken place is the substitution of an expanded system of Government-operated stores for the cooperative movement. It would seem, therefore, that the position of the small retailer, whose champion the Nazis professed to be, is worse than before. Whether, after the war, any of the State-operated stores—formerly cooperative—can be salvaged for the cooperative movement remains to be seen.

Employment Conditions

Recommendations in Annual Report of Secretary of Labor

THE annual report of the Secretary of Labor, for the fiscal year 1943–44, summarized the work of the Department of Labor for the year and made a number of recommendations regarding its field of coverage and duties after the war.

More than 85 percent of the labor disputes handled by the Conciliation Service were settled without any stoppage of work. Disputes so adjusted numbered 16,545 and involved 6,180,472 workers. Through the activities of the Wage and Hour and Public Contracts Divisions the sum of $18,620,369 was paid to 534,422 workers in 20,622 establishments for wages which had been illegally withheld. Other activities of the Department included the making of special surveys and research studies by the Bureau of Labor Statistics for various war agencies, supervision of women in war agencies by the Women's Bureau, intensified accident-prevention work by the Division of Labor Standards, and administration of child welfare and employment, as well as the emergency maternity and infant-care program of the families of the armed forces, by the Children's Bureau.

Labor movement.—The report enumerated the various legislative measures that have put "sound underpinning under the economic life of American wage earners." Regarding the trade-union movement the Secretary noted that in the United States it "has a status today never before enjoyed in any nation in the world." The report points out that it has "perhaps the greatest opportunity for service that has ever been offered to any such group organization" and suggests that it should devote the next decade or two to a program of public service. Such a program would include working for the interests of nonmembers as well as members, and cooperating with management to increase production, to expand and stabilize employment, to improve working conditions, and to work out labor-management relations that will prevent strikes and lockouts. This last measure would involve "the establishment of a pattern of direct negotiations between employers and workers, honest exchange of pertinent information, assistance by Government conciliation where necessary, orderly intervention in the form of mediation, voluntary arbitration of disputed points, and final recourse to fact-finding boards or panels with powers of recommendation but not of enforcement."

> It [the labor movement] must, of course, give assurance to the public as it takes part in the whole life of the community, that it will regard solemnly the rights of others, that it will prevent within its own ranks those occasional practices and occurrences which are against the public interest, that it will not tolerate excessive practices, wild-cat strikes, unfair treatment of individual members or prospective members by officers or locals; and that within the labor movement itself there will be found ways of preventing and doing away with antisocial tactics.

Recommendations

Functions of Department of Labor.—The recommendations of the Secretary as to the work of the Department were all for the post-war period, as follows:

In the immediate future after the war there will be need for a closer relationship and interlocking of Government labor functions. The various ministerial functions having to do with labor which are now exercised in a variety of agencies of the Government should be consolidated, harmonized, retained, or discarded, as need may indicate, within the United States Department of Labor after the war. Many of these are in the emergency agencies of Government serving special functions which will not be retained after the war.

Such functions of the War Manpower Commission as the Employment Service, Apprenticeship and Occupational Training should be transferred to the Department of Labor upon the necessary break-up of that organization. Such functions of the War Production Board as labor planning for production should also be transferred to the Department of Labor.

In proposing consolidation within the Department of Labor of all of the agencies having to do with labor relations it is clearly understood that the quasi-judicial and fact-finding function of the National Labor Relations Board should remain entirely independent and not reviewable by the Department of Labor or any of its officers. Future dealing with industrial disputes after the war should be based upon an early return to negotiation of wages by free collective bargining.

Other suggested post-war measures.—Regarding wage controls, social security, etc., after the war, the Secretary commented as follows:

To avoid a very real danger of wartime inflation, a certain measure of governmental control of wages has been necessary during the war. Government control of wages and working arrangements present enormous difficulties for all the factors in production—a unit of labor is the hardest to define and hence to evaluate in money. The most competent representatives of Government, even when bulwarked by employer and labor representatives, when charged with an official decision on wages can hardly be as well informed about any practical situation as are the workers and employers directly involved. Such officers are bound to follow verbal precedents and legalistic procedures as a protection against charges of favoritism and unfairness, and in these ways human needs as distinct from cold economic standards are neglected.

These human adjustments can best be achieved by the free relationship in which bargains are made directly by the workers and employers involved. The timing of such a return to the relaxing of wage controls must be carefully and responsibly studied by labor, employers, and the Government.

When the European war is over, it would be appropriate to study the question intensively and practically once we see the economic picture which is likely to continue during the Japanese war. Inflationary hazards will not be over and control of prices will undoubtedly be essential to the prevention of inflation and the fair operating of our economy until such time as we build back to an abundance of consumers' goods where competition will serve to keep prices at reasonable levels. The relation of wages to prices will have to be carefully considered. The return to wages established by free collective bargaining may have little effect upon inflation if it is provided that wage increases cannot be made a reason and basis for increasing prices. This I recommend.

Constant forward steps must be taken in the next 10 years on a well-conceived program of social security. The Social Security Act should be expanded to cover all workers; to provide a better level or a longer period of income under unemployment insurance and old-age insurance. We should in the next few years study the whole question of how to provide under social security techniques and out of social security funds what are known as "facilities" as distinct from cash for the care of such aged as need care, facilities for the sick and convalescent, and the crippled, and facilities for dependent or crippled or blind children and even facilities for the temporarily unemployed in periods of transition or when moving around the country in search of a proper job.

The labor movement and the Labor Department must study and be prepared to take part in a variety of experiments for improved housing for different types

of communities, climates, and family groups. This ought to be one of the great war projects in which the labor movement can participate with all other elements in the community. The improvement of the standards of living by greater knowledge of nutritional values, by cooperation with agriculture in the production and preserving and distribution of adequate food supplies is another extremely important item of participation in which the labor groups and the Labor Department can participate with other public bodies.

The labor movement should also study the most practical and important aspects of adult education and of the education and training for work. It is essential for the advance of labor and an improved standard of living that we maintain high production levels to keep our people employed at good wages so that they may buy not only the products of our industry but the raw materials and products of other countries; that we develop trade with the whole world on a reasonable basis, so that we may raise our own standards of living and at the same time assist others in improving their standards of living. We can thus contribute economically as well as spiritually to a permanent world peace, and think of wages and income as purchasing power—as a market which will bring about a balanced economy and serve as an opportunity for true social security and true cooperation.

The core of our policy, both domestic and foreign, so far as labor is concerned, is expressed in that slogan which the International Labor Organization adopted in the Philadelphia declaration, "poverty anywhere is a menace to prosperity and civilization everywhere."

Wartime Employment in Tire-Cord Manufacture[1]

Summary

A CRITICAL need for tires, especially for trucks, prime movers, construction equipment and aircraft, is evident in the War Production Board's current attempt to obtain a 25-percent increase in production of heavy-duty tires for the Army during the first quarter of 1945. This increase, if realized, will require greater supplies of both rayon and cotton tire cord and will intensify the problem of recruiting workers and raising average weekly hours in tire-cord manufacturing.

The War Production Board recently estimated that there was an adequate supply of tire cord and fabric for a period of about 75 days. This was a temporary situation resulting largely from labor shortages in the tire-building industry and the consequent inability of that industry to consume cord as rapidly as it was being produced. As the manpower shortage in the tire-building industry is alleviated and production is brought closer to requirements, establishments manufacturing tire cord will require the addition of several thousand wage earners. The seriousness of the problem is indicated by the downward trend of employment in tire-cord manufacturing, particularly in the Southern areas where tire-cord mills are concentrated.

This downward trend in employment was reversed, at least temporarily, in the last two months of 1944 when a slight rise in employment was reported. The increase must not only be maintained but enlarged, and the average weekly hours per wage earner will have to be kept at or above the higher December 1944 level if anticipated tire-cord needs are to be fulfilled.

[1] Prepared in the Bureau's Occupational Outlook Division by Sophia C. Mendelsohn under the supervision of Arthur W. Frazer.

Scope of Study

For the present study a group of 20 mills, whose combined production, both cotton and rayon, represents over 80 percent of all tire cord and fabric produced, were selected from the cotton-goods establishments reporting monthly to the Employment Statistics Division of the Bureau of Labor Statistics. A more detailed analysis was made for the Georgia mills, since 11 of the mills are in that State and their labor force constitutes two-thirds of the wage earners in the total sample covered. As two areas in Georgia—the Griffin-Thomaston and the Rome-Cartersville-Cedartown areas—are leading producers of tire cord,[2] data are presented separately for them. In addition, tabulations are shown for the North and the South, which give a clear picture of the preponderance of tire-cord producers in the South.

Mills making tire cord and fabric are customarily considered as part of the cotton-goods industry, although a third of the cord and fabric now being produced is made of rayon; the latter is preferred for use with synthetic rubber, particularly for heavy-duty tires.

Employment Trends in the Industry

Wage-earner employment in the 20 tire-cord and fabric mills analyzed rose from 25,100 in January 1942 to 27,900 in October 1942. This 11.2-percent gain in mill employment was better than the experience of the cotton-goods industry as a whole, which had a net increase of only 1.3 percent in the same period. The number of wage earners in the 16 tire-cord mills in the South actually rose 12.5 percent as against a decrease of 5.2 percent reported in the 4 Northern mills. Thus the concentration of tire-cord plants in the South, where there was less competition for labor by other industries, was an important factor in increasing the size of mill forces. Employment in the cotton-goods industry during the same period followed a similar pattern—a decrease in the Northern segment and an increase in the Southern. However, the increase in the Southern cotton-goods mills was only 4.5 percent as against the 12.5-percent gain for the Southern tire-cord plants.

In the following 15 months, from October 1942 to January 1944, the number of wage earners declined by 900, a drop of 3.3 percent, in the tire-cord plants. (There was a drop of 9.2 percent in the cotton-goods industry generally.) The rate of decline was gradual until the summer of 1943, following the general pattern of experience in the cotton-goods industry which lost workers to other war industries paying higher wages. Doubtless, the special efforts of the War Production Board and priority referrals of workers by local U. S. Employment Service offices placed tire-cord producers in a less difficult position than other cotton mills. Despite a decrease of 2.0 percent in total weekly man-hours between July 1943 and January 1944, the output of cotton and rayon tire cord and fabric in the first quarter of 1944 reached 75 million pounds—15 million pounds more than the production for the quarter beginning July 1943.

[2] These two areas are among the 36 areas covered by the Bureau's report Cotton Goods: Employment, Hours, and Earnings, and Turnover Rates, by Areas, January 1942–April 1944.

TABLE 1.—*Employment, Hours, Earnings, and Percent of Women Wage Earners in Tire-Cord Production, January 1942–December 1944* [1]

Year and month	Wage-earner employment	Man-hours per week	Average weekly hours	Average weekly earnings	Average hourly earnings	Percent of women wage earners	Straight-time average hourly earnings
Whole industry [1]					*Cents*		*Cents*
1942: January	25,050	1,004,338	40.1	$20.11	50.1	(2)	48.7
October	27,860	1,184,891	42.5	24.45	57.5	(2)	54.7
1943: July	27,568	1,188,003	43.1	25.17	58.4	(2)	55.3
1944: January	26,944	1,164,562	43.2	25.34	58.6	45	55.4
February	26,511	1,156,961	43.6	25.64	58.7	45	55.4
March	25,772	1,124,904	43.6	25.64	58.7	46	55.4
April	25,564	1,106,349	43.3	26.87	62.1	46	58.7
May	25,454	1,108,793	43.6	27.62	63.4	46	59.8
June	25,523	1,101,505	43.2	27.19	63.0	47	59.6
July	25,792	1,118,463	43.4	27.44	63.3	46	59.8
August	25,810	1,110,880	43.0	27.40	63.7	46	60.4
September	25,101	1,088,782	43.4	28.18	65.0	46	61.4
October	24,737	1,076,028	43.5	28.26	65.0	46	61.4
November	25,199	1,102,351	43.7	28.52	65.2	46	61.5
December	25,401	1,126,994	44.4	28.94	65.2	46	61.2
North [3]							
1942: January	1,832	73,021	39.9	24.03	60.3	(2)	58.7
October	1,736	72,158	41.6	29.04	69.9	(2)	67.1
1943: July	1,574	69,351	44.1	31.39	71.2	(2)	66.9
1944: January	1,411	61,684	43.7	31.68	72.5	(2)	68.4
February	1,417	62,677	44.2	32.03	72.4	(2)	68.1
March	1,390	62,939	45.3	31.54	69.6	(2)	64.8
April	1,368	59,535	43.5	31.37	72.1	(2)	68.1
May	1,358	60,609	44.6	32.68	73.2	(2)	68.5
June	1,365	60,774	44.5	32.73	73.5	(2)	68.9
July	1,313	59,712	45.5	33.72	74.1	(2)	68.9
August	1,311	60,227	45.9	34.30	74.7	(2)	69.2
September	1,327	56,646	42.7	31.35	73.4	(2)	69.8
October	1,343	61,768	46.0	34.31	74.6	(2)	69.1
November	1,374	61,411	44.7	32.97	73.8	(2)	69.0
December	1,363	62,055	45.5	33.84	74.3	(2)	69.1
South [4]							
1942: January	23,218	931,317	40.1	19.80	49.4	(2)	48.0
October	26,124	1,112,733	42.6	24.15	56.7	(2)	54.0
1943: July	25,994	1,118,652	43.0	24.79	57.6	(2)	54.6
1944: January	25,533	1,102,878	43.2	24.99	57.8	45	54.7
February	25,094	1,094,284	43.6	25.27	58.0	45	54.8
March	24,382	1,061,965	43.6	25.30	58.1	45	54.8
April	24,196	1,046,814	43.3	26.62	61.5	46	58.1
May	24,096	1,048,184	43.5	27.34	62.8	46	59.3
June	24,158	1,040,731	43.1	26.88	62.4	46	59.1
July	24,479	1,058,751	43.3	27.10	62.7	46	59.3
August	24,499	1,050,653	42.9	27.03	63.0	45	59.8
September	23,774	1,032,136	43.4	28.00	64.5	45	61.0
October	23,394	1,014,260	43.4	27.91	64.4	46	60.9
November	23,825	1,040,940	43.7	28.26	64.7	46	61.0
December	24,038	1,064,939	44.3	28.66	64.7	45	60.8

[1] Based on sample of 20 establishments the output of which in the third quarter of 1944 totaled more than 80 percent of all tire cord and fabric produced in the United States.
[2] Not available. [3] Sample of 4 establishments. [4] Sample of 16 establishments.

The loss of workers in the 20 tire-cord mills was even greater during the period January to October 1944. In 9 months the number of workers in the reporting establishments declined by 2,200 to a level of 24,700, the lowest since Pearl Harbor. Even so, tire-cord mills, with a net drop of 1.3 percent in employment from January 1942, were better off than other cotton firms; the employment decline in the entire industry was 15 percent over the same period.

The increase in employment during the summer months suggests the use of seasonal workers, such as students who sought employment during the vacation period. The substantial declines in employment in both September and October probably reflect a loss of workers

who had been temporarily available. Reports for the last 2 months of 1944, however, show a rise in the number of wage earners from the October low point. The last quarter of the year is normally a period of increased employment in the cotton-goods industry, especially in the Southern areas where there is a seasonal movement from farm work to mills toward the end of the year. The Southern trend may account in part for the addition of 700 employees, which brought the December total to 25,400 or 2.7 percent above October. This figure represents a drop of 5.7 percent from January 1944. However, between January and December 1944 the man-hours declined only 3.3 percent, the relatively smaller loss reflecting the modifying effect of an increase of 1.2 hours per week per wage earner.

EMPLOYMENT TRENDS IN GEORGIA

Employment trends in Georgia indicate that the drive to recruit labor into the industry was more successful among Georgia firms than elsewhere. From January to October 1942, for example, the 11 Georgia mills were able to make a net addition of 2,481 workers (14.3 percent) to their pay rolls, as contrasted with a total increase of only 329 workers (4.3 percent) in the other 9 mills included in the sample.

Moreover, the Georgia tire-cord mills were more successful in recruiting and holding their employees than the other local cotton mills with which they competed for labor. In the Rome-Cartersville-Cedartown area tire-cord producers showed an increase of 11.9 percent in employment between January and October 1942, whereas other cotton mills in the locality reported a decrease of 0.1 percent. During the same period, tire-cord producers in the Griffin-Thomaston area increased their employment 17.6 percent, more than twice the increase experienced in other local cotton mills. However, after this period of expansion, which ended with the close of 1942, employment began to drop and the Georgia tire-cord mills, which in the first 9 months had increased their number of wage earners at a rate much greater than other tire-cord mills or local producers of other cotton goods, thereafter showed losses of about the same magnitude.

Rom-eCartersville-Cedartown area.—Employment in the Rome-Cartersville-Cedartown area constituted a distinct exception to the falling employment which prevailed generally in the tire-cord industry.[3] In the 5 plants in this area the mill labor forces continued to increase in size until January 1944, a considerable time after employment in cotton goods generally and in the entire group of 20 tire-cord establishments began its downward trend. The tire-cord producers in this area lost 717 workers between January and October 1944. The October employment was 8,074 wage earners, a decline of 8.2 percent, which coincided with that of all tire-cord mills during the same 9-month period. In contrast, the 5 mills in November and December added 315 workers, contributing almost half of the total increase in employment shown by all 20 tire-cord mills for the 2 months.

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[3] Not all of the tire-cord plants included here in the sample for the Rome-Cartersville-Cedartown area are in the original sample for that area (Number 13) as shown in the report, Cotton Goods: Employment, Hours and Earnings, and Turnover Rates, by Areas, January 1942–April 1944. Two tire-cord mills from neighboring localities were added to augment the sample. Because of this difference, the data shown in table 2 are not comparable to that in the original study of 66 areas.

TABLE 2.—*Employment, Hours, Earnings, and Percent of Women Wage Earners in Tire-Cord Production in Georgia, January 1942–December 1944*

Year and month	Wage-earner employment	Man-hours per week	Average weekly hours	Average weekly earnings	Average hourly earnings	Percent of women wage earners	Straight-time average hourly earnings
Georgia [1]					*Cents*		*Cents*
1942:							
January	17,364	700,795	40.4	$19.95	49.4	(2)	47.9
October	19,845	851,782	42.9	24.21	56.4	(2)	53.5
1943: July	19,692	840,060	42.7	24.08	56.4	(2)	53.6
1944:							
January	19,066	815,102	42.8	24.34	56.9	45	54.1
February	18,568	805,937	43.4	24.84	57.2	45	54.1
March	17,925	776,506	43.3	24.78	57.2	45	54.1
April	17,788	761,298	42.8	25.79	60.3	46	57.3
May	17,643	760,655	43.1	26.81	62.2	46	58.9
June	17,621	753,563	42.8	26.49	61.9	46	58.8
July	17,920	774,528	43.2	26.99	62.4	45	59.1
August	17,882	765,725	42.8	26.75	62.5	45	59.4
September	17,359	747,244	43.0	27.49	63.9	45	60.6
October	17,105	730,915	42.7	27.06	63.3	46	60.2
November	17,411	756,363	43.4	27.65	63.6	45	60.1
December	17,554	778,907	44.4	28.31	63.8	45	59.8
Griffin-Thomaston area [3]							
1942:							
January	4,728	177,174	37.5	19.69	52.5	(2)	51.7
October	5,562	203,387	36.6	21.23	58.0	(2)	57.3
1943: July	4,975	186,733	37.5	22.54	60.0	(2)	59.1
1944:							
January	4,733	180,298	38.1	22.61	59.4	42	58.4
February	4,670	179,372	38.4	22.78	59.3	43	58.2
March	4,601	176,084	38.3	22.72	59.4	44	58.4
April	4,629	176,418	38.1	24.94	65.4	45	64.4
May	4,621	182,055	39.4	26.22	66.6	44	65.1
June	4,641	178,181	38.4	25.24	65.7	45	64.5
July	4,668	181,900	39.0	25.23	64.7	45	63.4
August	4,694	180,612	38.5	25.00	65.0	44	63.8
September	4,602	181,229	39.4	26.99	68.5	44	67.0
October	4,652	178,879	38.5	25.30	65.8	45	64.6
November	4,723	183,877	38.9	25.65	65.9	45	64.6
December	4,628	189,005	40.8	26.89	65.9	46	63.7
Rome-Cartersville-Cedartown area [4]							
1942:							
January	7,378	304,665	41.3	20.80	50.4	(2)	48.5
October	8,254	387,198	46.9	27.58	58.8	(2)	54.2
1943: July	8,622	391,865	45.4	26.18	57.6	(2)	53.6
1944:							
January	8,791	389,184	44.3	25.85	58.4	45	54.8
February	8,456	387,569	45.8	26.98	58.9	46	54.7
March	8,144	368,988	45.3	26.56	58.6	46	54.6
April	8,125	366,337	45.1	28.00	62.1	47	57.9
May	8,047	360,009	44.7	28.08	62.8	47	58.7
June	8,035	359,833	44.8	28.20	63.0	46	58.8
July	8,314	378,656	45.5	29.15	64.0	46	59.5
August	8,466	379,967	44.9	28.63	63.8	45	59.5
September	8,198	366,418	44.7	28.76	64.3	46	60.1
October	8,074	357,297	44.3	28.82	65.1	46	61.1
November	8,136	372,344	45.8	29.87	65.3	46	60.6
December	8,389	384,608	45.8	30.05	65.6	45	60.9

[1] Sample of 11 establishments.
[2] Not available.
[3] Sample of 3 establishments.
[4] Sample of 5 establishments.

The exceptional employment experience of the tire-cord plants can hardly be explained solely on the basis of the somewhat longer workweek and slightly higher earnings than in other Southern tire-cord centers, or in other cotton plants in the same area. Yet the tire-cord plants in this area did consistently offer their workers higher hourly earnings and at times substantially more overtime than the other cotton mills in the same area.

Slightly higher average hourly earnings among the 5 cord mills on the one hand and a longer workweek among other cotton mills on the

other, resulted in approximately equal weekly earnings in January 1942. Although other cotton mills in the area had by January 1944 increased their straight-time earnings by 7.1 cents, hourly earnings were still relatively higher in tire-cord mills. This, added to the effect of the lengthened workweek on average weekly earnings, without doubt influenced some workers to shift from other cotton-goods mills to those producing tire cord.

TABLE 3.—*Employment, Hours, and Earnings in Tire-Cord and Other Cotton Mills, Rome-Cartersville-Cedartown Area, January 1942–December 1944*

Month and type of plant	Wage-earner employment	Average weekly hours	Average weekly earnings	Average hourly earnings	Straight-time average hourly earnings[1]
				Cents	*Cents*
January 1942:					
Tire-cord mills	7,378	41.3	$20.80	50.4	48.5
Other cotton mills	9,374	42.1	20.34	48.3	46.2
October 1942:					
Tire-cord mills	8,254	46.9	27.58	58.8	54.2
Other cotton mills	9,363	40.1	21.40	53.4	51.9
July 1943:					
Tire-cord mills	8,622	45.4	26.18	57.6	53.6
Other cotton mills	9,106	42.6	23.44	55.0	52.4
January 1944:					
Tire-cord mills	8,791	44.3	25.85	58.4	54.8
Other cotton mills	8,676	42.4	23.73	55.9	53.3
December 1944:					
Tire-cord mills	8,389	45.8	30.05	65.6	60.9
Other cotton mills	7,736	44.0	27.28	62.0	58.3

[1] Straight-time average hourly earnings are estimated by means of adjusting to eliminate overtime (extra half-time) earnings for hours over 40 per week. See footnote 4, p. 534.

In January 1944 the tire-cord establishments in this area employed 8,791 workers, an increase of 19.2 percent since January 1942. In contrast to this gain, the other cotton-goods plants in the vicinity showed a net decrease of 7.4 percent. Although these tire-cord mills reported losses in employment over most of 1944, the figures for December show a decrease of only 4.6 percent since January 1944, whereas the drop in employment among other cotton-goods firms in the Rome-Cartersville-Cedartown area amounted to 10.8 percent for the same period. Higher wage rates and a longer average workweek mean that the tire-cord worker in December 1944 averaged $2.77 more than his neighbor working in another cotton mill in the area.

Three of the five tire-cord plants in the Rome-Cartersville-Cedartown area are operated by the Goodyear Tire & Rubber Co. These three mills constitute a large factor in determining the direction and rate of movement of employment for the area. It is known that the company instituted a 24-hour day, 7-day week, work schedule early in 1942. This longer workweek, with resultant higher average weekly earnings, is probably one of the reasons for the increase in wage earners in these plants.

Griffin-Thomaston area.—The experience of the tire-cord mills in the Griffin-Thomaston area affords a contrasting situation, with shorter hours relative to other cotton mills in the same area, accompanied by recruitment difficulties similar to those of the cord mills generally in the South.

The increase in employment in the Griffin-Thomaston area during the 9 months after the attack on Pearl Harbor paralleled that of the Rome-Cartersville-Cedartown area, but thereafter the experience

of the Griffin-Thomaston mills followed the pattern of the cotton-goods industry generally. With the subsequent development of a tighter labor market, the tire-cord plants and mills producing other cotton constructions in the Griffin-Thomaston area fared alike in the loss of workers. Contrary to experience elsewhere, the average weekly hours in the tire-cord establishments in this area have been consistently lower than weekly hours in other cotton mills in the vicinity ever since January 1942. By December 1944, cord-mill workers were averaging 40.8 hours per week, while other cotton producers in the locality were working their employees 41.8 hours per week. Straight-time hourly earnings in cord plants averaged about 3 cents higher, but weekly earnings were about the same in both.

TABLE 4.—*Employment, Hours, and Earnings in Tire-Cord and Other Cotton Mills, Griffin-Thomaston Area, January 1942–December 1944*

Month and type of plant	Wage-earner employment	Average weekly hours	Average weekly earnings	Average hourly earnings	Straight-time average hourly earnings [1]
				Cents	*Cents*
January 1942:					
Tire-cord mills	4,728	37.5	$19.69	52.5	51.7
Other cotton mills	4,836	37.9	18.12	47.8	47.0
October 1942:					
Tire-cord mills	5,562	36.6	21.23	58.0	57.3
Other cotton mills	5,209	38.6	21.23	55.1	54.1
July 1943:					
Tire-cord mills	4,975	37.5	22.54	60.0	59.1
Other cotton mills	4,672	39.3	22.18	56.4	55.2
January 1944:					
Tire-cord mills	4,733	38.1	22.61	59.4	58.4
Other cotton mills	4,547	40.1	22.89	57.1	55.5
December 1944:					
Tire-cord mills	4,628	40.8	26.89	65.9	63.7
Other cotton mills	4,401	41.8	26.40	63.2	60.5

[1] Straight-time average hourly earnings are estimated by means of adjusting to eliminate overtime (extra half-time) earnings for hours over 40 per week. See footnote 4, S. 534.

The cord mills in the Griffin-Thomaston and in the Rome-Cartersville-Cedartown areas face similar local situations with respect to competition for labor from other local war industries and Army installations. Thus, the fact that mill labor forces in one area increased continually until January 1944 and in the other dropped continually after 1942 suggests factors other than the problem of available labor supply, and points to the possible significance of small differences in overtime and average hours weekly earnings.

Average Weekly Hours

Average weekly hours in the 20 tire-cord plants increased from 40.1 in January 1942 to 44.4 in December 1944—an increase of more than 4 hours per employee. This meant a gain of 123,000 man-hours per week over January 1942, with an increase of less than 400 employees. However, as compared with October 1942 when employment was almost at its peak, the 20 tire-cord mills operated with 58,000 fewer man-hours per week in December 1944, a decline of 4.9 percent in total labor input. The average of 44.4 hours a week per worker in December 1944, while reflecting greater labor utilization than at the beginning of the war period, is still somewhat lower than might be expected under the 48-hour workweek required by WMC regulations.

The differences from mill to mill even in the same area are substantial. The wide variation in average weekly hours among the 20 tire-cord mills in December 1944 is shown in table 5.

TABLE 5.—*Average Number of Hours Worked per Week per Wage Earner in 20 Tire-Cord Establishments, December 1944*

Average weekly hours	Total number of establishments	Georgia	All other	Major Georgia areas	
				Rome-Cartersville-Cedartown	Griffin-Thomaston
All establishments	20	11	9	5	3
Less than 38.0 hours	1	1			1
38.0 to 39.9 hours	1		1		
40.0 to 41.9 hours	2	2		1	1
42.0 to 43.9 hours	3	2	1		1
44.0 to 45.9 hours	7	2	5	1	
46.0 to 47.9 hours	5	4	1	3	
48.0 hours and over	1		1		

If the average for the seven mills working less than 44 hours were raised to 44 hours an additional 26,000 man-hours per week would be available for the production of tire cord and fabric.

Average Hourly Earnings

Average hourly earnings, which were 50.1 cents in January 1942, rose to 65.2 cents in December 1944, an increase of over 15 cents per hour in the national average for tire-cord plants. By December 1944 average hourly earnings in the entire cotton-goods industry were 64.8 cents, an increase of 14.1 cents since January 1942. Although the average hourly earnings in the manufacture of tire cord show a continued upward trend since January 1942, part of the increase must be attributed to the longer workweek and resultant overtime payments. Nevertheless, after adjustments to eliminate overtime payments, the straight-time average hourly earnings still reflect continual upward adjustment in wage rates.[4]

Straight-time earnings in the 20 tire-cord mills rose from 48.7 cents in January 1942 to 61.2 cents in December 1944, an increase of 12.5 cents an hour. The earnings increased 6 cents in the 9 months January to October 1942, when tire-cord producers were adding more workers to mill forces, and another 6 cents between January and December 1944, principally as a result of actions before the National War Labor Board during the period. In the interval between October 1942 and January 1944 straight-time average hourly earnings showed very little change.

Average weekly earnings among the tire-cord mills, reflecting the increases both in average weekly hours and average hourly earnings, rose from $20.11 in January 1942 to $28.94 in December 1944.

[4] Adjustment factors, to eliminate the effect of overtime earnings, were taken from the Bureau's reprint Serial No. R. 1496, Elimination of Overtime Payments from Gross Hourly Earnings. The estimates of straight-time earnings are subject to numerous limitations, particularly when the adjustment factors which are based on average relationships are applied to a small number of plants.

Wartime Policies

Recent Manpower Directives

VARIOUS measures have recently been taken by Government agencies to provide manpower for essential production and for the armed forces, by better utilization of workers or by recruitment.

Better Utilization of Labor

Workers for critical areas.[1]—To effect the better utilization of workers in war industries in critical labor areas, the War Manpower Commission has outlined the following program:

1. Only employers whose orders are in the 3 highest categories[2] may have gate-hiring privileges. .
2. Authorized referral channels are to be restricted to referral only to orders in categories 1, 2, and 3.
3. Voluntary and negotiated interplant and intraplant transfers are to be made to the maximum extent possible. In this connection, the WMC states that the cooperation of appropriate unions should be obtained to assure that the maximum number of voluntary and negotiated transfers are accomplished.
4. Employers with orders on priority are to be urged to be more stringent in their issuance of statements of availability, and to take such other actions as will reduce turnover.
5. Issuance of statements of availability by local offices is to be closely supervised to insure strict administration of the employment-stabilization program. Exceptions to this procedure may be permitted (if determined to be in the best interest of the war effort) when workers not eligible for such statements are qualified for, and are willing to accept, jobs in categories 1, 2, and 3.

If, in any plant, the actions above outlined do not meet the problem, the WMC recommends that action be taken, in cooperation with the War Production Board and the procurement agencies, to require the transfer of qualified workers engaged on less-urgent production in the plant. If all the foregoing measures have failed to meet the needs of urgent war production, the program for forced release of workers must be applied, unless—

1. Other actions are currently in progress which give assurance that manpower deficiencies in the top priority plants will be met within 2 weeks; or,
2. Manpower inventories of establishments engaged in less-urgent activities reveal that workers qualified for transfer to priority jobs are not to be found in the area; or,
3. None of the orders in priority categories 1 or 3 meets the wage, salary, or working conditions required by State or Federal law or wage-adjusting agency.

Employment-ceiling program.—To provide a means of allocating the available labor supply to those employers most urgently in need

[1] War Manpower Commission, Field Instruction No. 505, Part I—Revised, January 13, 1945.
[2] For a description of these order categories, see Monthly Labor Review, February 1945 (p. 295).

of workers, an employment-ceiling program is to be applied. It is to be accomplished by—

1. Establishing the minimum number of workers required to meet a plant's approved production schedule.
2. Establishing the minimum number of workers needed in the area to carry on essential war production and essential civilian services.
3. Limiting or reducing the number of workers employed in less-essential, or less-urgent essential, production and services, when such workers are needed for more urgent production and services.

The employment-ceiling program is to be applied by the Area Manpower Director with the assistance of the Manpower Priorities Committee and the Management Labor Committee.

Applying program for forced release of workers.—This program is designed to recruit workers needed for local orders in priority categories 1 and 3, and is not to be applied to interarea recruitment needs. To obtain manpower in this manner, the orders must be those for which workers would not have good cause for refusal under any of the following standards governing priority referral:

1. Employment at a wage or salary or under working conditions below standards established by State or Federal law.
2. Employment at a wage or salary below a level established or approved by the National War Labor Board (or other agency authorized to adjust wages or approve adjustments thereof) as warranting adjustment.
3. Employment in which the wages or working conditions are not reasonably comparable to those prevailing for similar employment in similar establishments in the community.

In addition, there are other criteria that the orders must meet: They must be from establishments (1) which are complying with WMC regulations, (2) which in whole or in part are on a workweek of at least 48 hours (unless the establishment or that part of the establishment where the workers are to be employed is clearly qualified for exemption from a 48-hour week requirement), (3) in which even improved utilization of the existing work force would not remove the need for additional workers; and (4) in which the openings cannot be filled through intraplant transfer of workers from less-urgent production.

Employment Ceilings and Reemployment Rights

Employers may not exceed employment ceilings on the ground that reemployment or seniority provisions in collective agreements require the rehiring of former employees. The WMC states that the obligation imposed by an employment ceiling will not ordinarily conflict with rights or obligations under such agreements, since the employer is always at liberty to lay off employees in order to make room for workers who have greater reemployment rights. Should conflict occur, however, the employment ceiling is paramount.

This program is not to restrict or limit reemployment rights conferred by State or Federal law.

Occupational Deferments [3]

Men who leave the jobs for which they were deferred, without the consent of their local boards, will be reclassified for induction into

[3] National Headquarters of Selective Service, Press release S–57, January 7, 1945.

the Army, National Headquarters of Selective Service has announced. Local boards of the Selective Service System have been instructed by National Headquarters promptly to reclassify men who change jobs without satisfying their local boards that the change will result in a greater contribution to the war effort. The boards were informed that Army physical standards to be applied to these men will be much lower than those under which men are inducted for general military service.

This action has been taken because the larger number of American divisions now actually engaged in combat, and the continuing pressure against the enemy, has increased the requirements for physically fit soldiers and sailors. For these reasons, Selective Service states, it will be necessary to induct increasing numbers of men from the older age groups. At the same time, the larger number of American divisions now actually engaged in combat, and the continuing pressure against the enemy, have also greatly expanded the requirements for military supplies of all sorts. This has resulted in a sharp upward revision of many war production schedules, requiring a substantial number of additional workers in direct war production activities.

In applying the tests for occupational deferment for registrants in the older age groups (26 through 29 and 30 through 37), greater consideration is to be given to registrants now engaged, or who become engaged, in war production or in support of the war effort, than to those engaged in activities not supporting the immediate prosecution of the war. Registrants of lesser skills may be more important in war production, or activities directly supporting the war effort, than those of greater skills in other activities not in direct support of the war effort.

To increase the effective utilization of the Nation's manpower, Selective Service has stated that registrants who leave the employment or activity for which they were deferred without permission of their local boards will be reclassified for induction. However, if the registrant leaves the employment for which he was deferred without first requesting the local board to make such determination, the local board may nevertheless determine (1) that it was in the best interest of the war effort for the registrant to have left such employment for other work, or (2) that there were adequate reasons involving the registrant or his immediate family which justified the registrant in leaving such employment; provided that the local board finds that the registrant's failure to request such determination was due to unusual or compelling circumstances, in which case the registrant shall not be reclassified for induction.

These provisions are not to apply to any registrant who has been separated from the land or naval forces on or after September 16, 1940, under conditions other than dishonorable.

In the meantime, the local boards have been provided with a list of essential activities.[4] The list, drafted by the War Manpower Commission after consultation with representatives of the Army, Navy, Selective Service, and War Production Board, has been recommended by the Director of War Mobilization and Reconversion as a guide in determining the men to be selected for the armed forces in the age

[4] National Headquarters, Selective Service System, communication to all local board members, January 15, 1945; War Manpower Commission, Press release PM-4749, January 16, 1945.

group 26 through 29. The Director further recommended that registrants be taken, as far as possible, in the following order: (1) From jobs not on the essential-activities list, (2) from relatively unimportant jobs in essential but not critical activities, (3) from relatively unimportant jobs in critical activities, (4) from relatively more important jobs in essential activities, and (5) from more important jobs in critical activities. The local boards were informed, however, that if a replacement is available for a registrant, he should be classified as available for induction regardless of his place in the groups listed above.

Veterans for War Work [5]

A representative of the U. S. Employment Service of the War Manpower Commission, stationed in each of the 17 Army separation centers throughout the country, is to encourage discharged veterans to accept employment in critical war production. This arrangement is the result of an agreement between the WMC and the War Department, and involves veterans who are not returning to jobs to which they have reemployment rights. During the group conferences conducted for discharges by military personnel, veterans are informed that a USES representative is available, and each of these representatives is given an opportunity to describe the services rendered by USES. If the veteran does not intend to return to a job on which he has reemployment rights, the employment representatives inform him about urgent needs of war production in the area to which he is going, and endeavor to persuade him to accept a job that fully utilizes his skills. In order to provide information to separation-center interviewers concerning urgent manpower needs, each local USES office within the area served by the center has been instructed to submit biweekly plant reports on the status of manpower. When a veteran indicates a willingness to accept an urgent war job, a referral card is sent to his local office, and if he indicates an interest in a particular plant, the name of the plant is entered on the card.

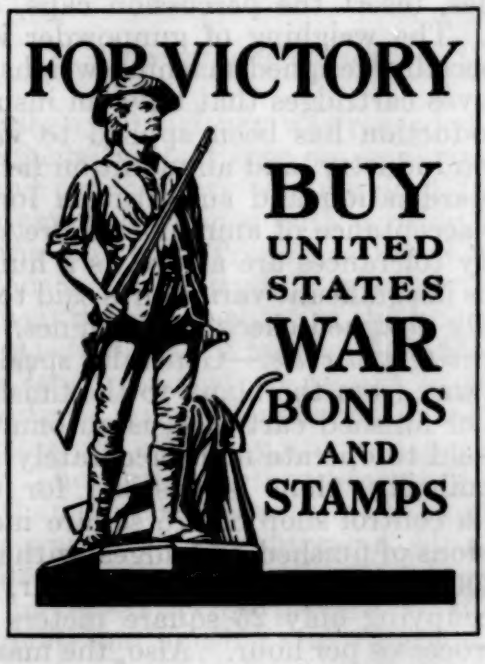
Relaxation of Restriction on Hiring at Rates Above Minimum [7]

THE National War Labor Board has amended its General Order No. 31, which governs individual wage adjustments, to provide that under certain circumstances an employer in critical or essential war work may hire workers at wage rates above the minimum of their job-rate range without regard to the "25-percent limitation" of the order.

General Order No. 31 permits employers, who have job-classification rate ranges, to hire for jobs with established wage ranges new employees at rates above the minimum, provided such employees do not exceed 25 percent of all the employees hired for such jobs; in new establishments or departments, the proportion permitted during the first year of operation is 50 percent of the total for the establishment.

[5] War Manpower Commission, Press release PM 4747, January 8, 1945.
[6] See also Employment Aids for Veterans, p. 546 of this issue.
[7] War Manpower Commission, Press release B-1939, January 31, 1945.

The new amendment provides that whenever the War Manpower Commission certifies in writing to an agent of the Board that a particular employer is actually engaged in critical or essential war work, has observed all the rules and regulations of the WMC, and is faced with a critical hiring problem as a result of the limitations of the general order, the agent of the Board is to authorize the employer to hire workers without regard to such limitations. Such authorization must be made within 5 days after the certification is received from the WMC, provided the Board agent does not stay the effective date within the 5-day period. The employees hired must be those who were laid off or discharged from their last positions because of a cut-back or elimination of essential war work, or employed in noncritical or nonessential work, as stated in the WMC certificates of referral which must be presented by such employees. An employee hired in accordance with the provisions of this amendment may be hired at any rate within the appropriate rate range for the job classification corresponding to his ability and experience. An employee whose rate in his last position was below the minimum of the appropriate rate range of his new employer is to be hired at a rate no lower than the minimum rate of the rate range; and he may be hired at the above minimum only if the hiring is made subject to the 25-percent provision of the order.



Productivity of Labor and Industry

Technology and Productivity in Germany's Ammunition Industry[1]

ALONG with the development of new ammunition and new substitute metals, German ammunition manufacturers have made great efforts to develop better and more efficient methods of mass production and at the same time obtain the greatest possible degree of accuracy in production. In close cooperation with the machine-tool industry, both the manufacture and the inspection of ammunition have been mechanized and automatized more and more.

Mechanization.—In cartridge factories, the machines are so arranged that the ammunition is practically being manufactured on the conveyor-belt system. The blank from which the cartridge case is manufactured is cut, by machine, to unvarying dimensions and weight; other machines form the cartridge case by means of cold-hammering, which insures the greatest accuracy; and still other machines drill the small flash holes, insert the percussion caps, and fit the bullet into the cartridge. The weighing of gunpowder is also done automatically. An especially designed machine weighs every charge and automatically removes cartridges that have an insufficient charge.

Standardized production has been applied to virtually the entire German ammunition industry, and ammunition factories have served as models of standardization and substitution for other industries. The conditions for acceptance of ammunition are said to be so strict that very frequently tolerances are as low as a hundredth of a millimeter; and even this insignificant variation is said to have been further reduced by especially designed checking machines.

Effects on productivity and costs.—Generally speaking, each piece of ammunition on its way from the blank to the finished cartridge case, finished projectile, or finished cartridge, is automatically checked by machinery that is said to operate more accurately and reliably, more rapidly and economically, than is possible for the human hand. Where formerly in a control shop of 175 square meters, 90 workmen checked the dimensions of finished cartridges, with each man handling a maximum of 1,200 checking processes per hour, today 1 workman with a machine occupying only 25 square meters of space manages 100,000 checking processes per hour. Also, the manufacture and control of aircraft and artillery ammunition is said to be extensively carried out by machines, resulting in substantial savings in manpower and raw materials.

The Völkische Beobachter (Berlin) of September 11, 1943, in a long account of modern assembly-line and mechanized production, stated

[1] Data are from articles in the Deutsche Zeitung in Norwegen (Oslo), September 15, and the Völkische Beobachter (Berlin), September 11, 1943.

that if 1,000 shells are manufactured by automatic machines, instead of by lathe as was usual during the war of 1914–18, a saving of 11 machines, 11 workers, 11 sets of loam boards or tools, approximately 28,000 kilograms of iron and steel, and nearly 78,000 reichsmarks in investment costs results. The delivery of a few such automatic machines for motor-block production by a German machine factory is said to have released more than 1,130 skilled men and specialists, and as many machines, and to have saved 6,000 tons of raw material, 1.9 million working hours, and 11 million reichsmarks in investment costs.

Problem of Raising Labor Productivity in Great Britain [1]

THE immediate wartime need for raising production with a reduced labor force and the desire of the British Government to join with other nations after the war in maintaining an expansionist economy, based on a high level of employment, rising national income, and improved living standards, have resulted in increased emphasis on raising man-hour output in industry. Mechanization of production, concentration of small plants into larger units, and greater standardization of products are urged. Direct comparisons are made with industrial methods and productivity in the United States to show the results obtainable under more fully mechanized industrial conditions.

Government Policy

The raising of industrial efficiency was regarded as fundamental in the British Government White Paper on employment policy,[2] which stated that increased productivity was required, in order to insure a high level of employment combined with a rising standard of living. The President of the Board of Trade has urged national and international action to insure an expanding economy. According to the Home Secretary (speaking as a member of the Labor Party) the battle of the next few years is to be one of production. He advised labor that it was unnecessary to suspend efforts to obtain wage advances and better working conditions, in the effort to obtain the increase in general productivity and industrial efficiency which management and workers agree is necessary. The Parliamentary Secretary to the Ministry of Production stated that British production was approximately 30 percent above the pre-war level, as contrasted with an increase of 80 percent in the United States. When hostilities cease, exports from Britain should be increased by 50 percent at the same time that deficits in civilian goods and housing and other home needs are made up. Although the accumulated scarcities will give a period of grace of several years, thereafter, England and the rest of the world will have to face the alternative of efficient production supported by a higher

[1] Sources: Great Britain, Parliament, House of Commons, Debates October 24 and November 7 and 8, 1944; British Information Services, Press release No. L–97; Economist (London), October 14, 21, and 28, 1944; Labor Research (London), November 1944; Coal Age, September 1944; Office of War Information, Press release WPB–6329; and reports from United States Embassy, London, by Don C. Bliss, commercial attaché (Nos. 18,780 and 18,913), Dorsey G. Fisher, second secretary (No. 18,806), and Samuel Berger and Richard A. Johnson, third secretary (No. 441).

[2] For a summary of the White Paper see Monthly Labor Review for August 1944 (p. 296).

standard of living at home and abroad or of unemployment on a scale not previously experienced.

Policy of Organized Labor

Fear of unemployment has been an important reason for worker opposition to the introduction of methods designed to reduce labor requirements. However, in view of the changed outlook now that the Government has outlined its employment policy, organized labor is modifying its attitude toward production questions. This was shown at the October 1944 session of the Trades Union Congress, when a spokesman for the general council of the organization gave an assurance that "the trade-union movement is prepared to make such alterations in its structure and practices as the operation of public ownership and a policy of full employment show to be necessary." Although the statement on production is linked with public ownership, admission of a need for change signifies a trend. The same speaker declared that the unions must aim at increasing output and productivity.

The general council's Interim Report on Post-War Reconstruction presented to the Trades Union Congress at the conference stated that the organized labor movement would not be found unwilling to fit its policies to the real needs of full employment. However, a share in the control of industry was claimed, being based "primarily on the simple democratic right of workpeople to have a voice in the determination of their industrial destinies. It is supported by the knowledge that it is only by recognition of this claim that the potentialities, experience, and good sense of the workers can be drawn upon and the full productive powers of industry be effectively realized."

In view of the urgency of the need for production, the proposal made by the Trades Union Congress during the summer of 1944 for a 40-hour week after the war, with no reduction in pay, caused adverse comment in circles normally friendly to labor. Both the Manchester Guardian and the Economist commented that, unless a compensatory increase occurred in man-hour output and unless labor was willing to agree to night-shift work, it was not clear how British industry, and especially export industries, could afford to meet the demand.

Policies of Employer and Other Groups

A report issued by the Committee on the Organization of Industry of the Federation of British Industries in 1944 refers to the need for efficiency and suggests that trade associations might "speed up the introduction of new inventions and improvements and the elimination of out-of-date capacity and equipment."

A great deal was done by the Economist to focus public attention on the need for greater labor productivity in a series of articles entitled "A Policy for Wealth," published in the latter months of 1944.

In the October 14, 1944, issue, the Economist summarized its recommendations under 20 points, stating that they might be regarded as no more than chapter headings. Briefly, Britain is urged to (1) raise the standard of output to insure the success of full employment and social security; (2) increase labor productivity by 2½ percent

annually (in place of the average yearly advance of 1½ percent in past decades) thereby bringing the British productivity rate in 1975 to the United States level of 1944; (3) speed up the rate of increase in installation of productive equipment; (4) insure a sufficient supply of savings to raise the volume of productive investment;(5) prevent unproductive forms of capital (even housing) from absorbing more than their fair share of savings; (6) supply capital on equity terms (i. e., on a risk-sharing and profit-sharing basis), especially to small firms; (7) redistribute the tax burden on industry, to encourage replacement and extension of productive equipment; (8) make public or private ownership secondary to producing the maximum output at minimum labor cost; (9) bring restrictionism by producers within bounds, as it is an enemy of efficiency; (10) ban cut-throat competition and replace it with "competition in prosperity" coupled with an effective full-employment policy; (11) secure acceptance by labor and capital of the fact that good profits and high wages go together; (12) obtain rejection of restrictive policies by trade-unions that result in reduced output per man-hour; (13) defer observance of shorter working hours (unless higher weekly output would result) until national output reaches a specified figure; (14) introduce double-shift plant operation as the rule, wherever substantial mechanical equipment is involved;(15) endeavor to increase the scientifically trained by four or five times within a generation; (16) close the gap between those trained in universities and in industry by establishing institutes of technology; (17) greatly enlarge expenditures in industry for scientific research; (18) improve the quality of industrial management; (19) rationalize distribution; and (20) examine the wastes directly and indirectly involved in some forms of advertising.

Treatment of Problems in Individual Industries

COTTON INDUSTRY

The future of the cotton industry has been the special subject of study by governmental, employer, and worker agencies, and the conclusions reached regarding productive efficiency in this single industry reflect the general policies of these respective groups.

In a report issued during January 1944 by the industry's Cotton Board committee on post-war problems, a centrally directed price-management policy with legislative backing was described as an essential prerequisite to the reorganization of the industry. Amalgamations of companies were advocated by the same body later in the year; although compulsion was not favored, members of the industry stated that without it large-scale amalgamation was unlikely to take place.

On September 19, 1944, the Board of Trade, acting for the Government, recommended an immediate program to (1) achieve more efficient and financially stronger units through amalgamation; (2) reequip plants with modern machinery and facilities; (3) overhaul the merchandising organization; (4) modernize and simplify the wage structure; and (5) introduce the double-shift system of operation.

The legislative council of the United Textile Trades Unions, recognizing that the trend is toward mechanization, stated that when the industry becomes able to install modern types of machinery the

fullest consideration will be given to shift operation. Previously, the unions had consistently opposed attempts to introduce double-shift work in the industry. However, the realization now exists that costs of modern installations would be prohibitive if they were used only 40 to 48 hours weekly and then left idle for the remainder of the week.

Concern over meeting the wartime needs for cotton also led to the appointment of the British Cotton Textile Mission to study the American cotton industry during the spring of 1944. The Mission concluded that the cotton-industry worker in the United States produced on the average 1¼ to 10 times as much per hour as the British worker in Lancashire, mechanization being a large factor in explaining the difference in labor productivity. In the weaving branch, 95 percent of the looms were found to be automatic in the United States, compared with 5 percent in Britain. Based on normal staffing, the man-hour output in Britain was estimated as less than that in America by the following percentages: 18 to 49 in the spinning branch of the industry; 80 to 85 in winding; 79 to 89 in beaming; and 56 to 67 in weaving. Therefore, considerably larger working forces were required in British than in American mills, variations being from 12 to 786 percent more. Fine spinning is an exception, and in this branch the labor requirements were stated to be some 5 percent less in Britain than in the United States.

Reasons, other than mechanical, cited to explain the variations in labor productivity, are differences in the application of scientific methods in utilizing labor, in standardization of product, and in multiple-shift operation. On the personnel side, the Mission in its report commented on the relatively lower average age of the labor force in the United States and stated that "American mill managers, generally, are young and analytical and progressive in their outlook."

To bring the English productivity rate into line with that in the United States, the Cotton Textile Mission recommended (1) adopting a higher degree of standardization and specialization in production, to allow the introduction of uninterrupted mass-production methods; (2) raising the general standard of technical equipment and re-equipping to meet required adjustment to standardized mass-production methods; (3) improving working conditions; (4) introducing a greater degree of cooperation between spinners and manufacturers, toward the greatest possible rise in productive efficiency in both sections of the industry; (5) raising the level of scientific training of the managerial staff of British mills; and (6) securing greater economy in the utilization of labor.

Stress was placed on mass-production methods to attain a substantial increase in man-hour output. To accomplish this, the Mission stated, practice in the industry would have to be reoriented completely; this would entail heavy capital expenditure, multiple- or at least double-shift operation, a progressive outlook on the part of managers and workers, and consequential changes in the relations between producers and distributors. Concentration on bulk lines should not interfere with the output of special products which yield a higher return per unit. Both lines are desirable, provided they are produced efficiently. Finally, lower productivity in Britain is not attributed to lack of skill on the part of the Lancashire operative, whose ability the Mission believes "remains unsurpassed."

COAL INDUSTRY

Coal-mine mechanization was extended, as a war measure, to relieve the stringency in the fuel supply. Machinery was obtained to produce coal by stripping, a type of mining in which productivity is ordinarily higher than in deep mining. As a result, strip-mined coal, of which Britain had practically none prior to 1942, increased from an average monthly total of 175,500 tons in 1942–43 to 460,600 tons in 1943–44 and 947,800 tons in the first 5 months of 1944–45. No statistics have been released showing the rate of man-shift output for strip mines as compared with deep workings.

A special mission to England from the United States studied the progress of strip mining and reported (in August 1944) that excellent use was being made of the American strip-mining machinery installed to increase coal production. The mission expected that the rate of strip production could be raised from the then current 10 million tons a year to 18 or 20 million tons with the aid of American equipment. This estimate was based on the assumption that all equipment allocated or recommended for allocation would be received and placed in operation. British estimates placed the maximum at 15 million tons a year for the coming coal year.

Reporting on deep-mine equipment provided under the 1944 program plus that to be furnished in 1945, the coal mission concluded that the British should be able to increase underground production, which had lagged, by approximately 12 million tons annually. After completing the mine training program, it was anticipated that the American equipment could be placed at work effectively. Of the 190 million tons of annual production, 40 million tons could be mined with American-type equipment immediately, in the mission's view, and a large part of the remaining 150 million tons could be placed on a mechanized basis gradually. This could be accomplished after major changes were made in transportation, preparation, and methods of dealing with the difficulties of converting from complete long-wall operations to complete room-and-pillar systems of mining. It was added that American equipment will not operate as well in British mines as in those of the United States, owing to differences in underground and physical conditions. Once the problems susceptible to improvement are solved, use can be made of the equipment on a large scale.

Discharged Veterans

Employment Aids for Veterans

GOVERNMENT agencies having a direct interest and responsibility in the return of servicemen to civilian status have recently issued plans, instructions, and reports concerning the following provisions for aid to returned personnel of the armed forces.

Employment Counselling Service.[1]—The War Manpower Commission, on December 10, 1944, announced plans for an expanded employment counselling service in local offices of the U. S. Employment Service, to assist returning veterans, displaced war workers, new workers, and other job applicants. The new program, developed by WMC with the assistance of an advisory committee composed of representatives of management, labor, veterans' organizations, vocational guidance organizations, colleges, and universities, was to be introduced at a series of five interregional conferences, the first of which was held in New York City, December 11–19, representatives from New England, New York, New Jersey, Pennsylvania, and Delaware participating.

The expanded employment counseling program calls for the performance of the following specific functions:

1. Assisting the applicant to discover, analyze, and evaluate his potential abilities.
2. Providing current information on exact job requirements and employment opportunities.
3. Assisting the applicant to formulate a vocational plan, by relating his known and determinable abilities and interests to occupational requirements and to the demand for workers in such occupations, and assisting him in putting the plan into effect.
4. Putting the applicant in touch with community facilities, including training, through which he may better equip himself for employment in his chosen field.
5. Discovering and analyzing some of the factors that have prevented an individual from finding work or holding a job in his chosen field, and assisting him to overcome these barriers to employment.
6. Assisting the applicant in locating a suitable job.
7. Follow-up of the applicant where necessary, after he has been placed on a job or referred to training.

Following the field conferences a nucleus of trained personnel is to be established in each State to develop and put into operation a State-wide program of employment counseling services. This is to be accomplished by the establishment of "pilot centers" in from one to three USES offices in each State, depending on the size of the State, to which selected USES employees from other offices in the State are to be brought for on-the-job training in employment counseling. As sufficient trained personnel becomes available through training

[1] War Manpower Commission, Press release PM–4725, December 10, 1944.

conferences and on-the-job training, the expanded employment counseling program is to be installed in USES local offices.

Role of USES in payment of readjustment allowances.[2]—It will be a responsibility of the local offices of the USES, according to instructions of December 12, 1944, to offer veterans referral to suitable work, and to report to unemployment-compensation agencies any refusal by a veteran of such referral, or his refusal to accept suitable employment following referral. This provision is occasioned by the fact that any veteran honorably discharged or released from the armed forces after 90 days' service, is entitled to a readjustment allowance of $20 per week for each week of unemployment, not to exceed a total of 52 weeks. This allowance is to be paid under the following conditions: If the unemployment occurs not later than 2 years after discharge or release or the termination of the war, whichever is the later date; if the person is able to work and is available for suitable work; and if the veteran is registered with and continues to report to a public employment office in accordance with its regulations.

When the ex-serviceman refuses, without good cause, referral to or employment in suitable work, the local USES office interviewer is to explain to the veteran that it is in the latter's own interest not to exhaust unnecessarily his right to 52 weeks of readjustment allowances, but to preserve it against occurrence of a real need for exercising that right. If, in spite of the interviewer's attempts to refer him, the veteran continues to refuse, the latter should be routed, before he leaves the local office, to the veterans' employment representative for further discussion. The representative will endeavor to convince the former serviceman not only of his self-interest in preserving as long as possible his right to readjustment allowances, but also of the urgent need for him to accept essential employment if it is available. On this latter point, although efforts should be made to induce veterans to accept referral in high-priority job openings, they are not subject to the restrictions incident to priority referral.

Failing in these efforts, however, any determination regarding disqualification of the veteran to receive readjustment allowances remains the responsibility of the unemployment-compensation agency concerned, but the USES is to provide that agency with unequivocal information on the basis on which to arrive at a determination.

Nonagricultural Placements of Veterans in 1944[3]

MORE than 800,000 placements of veterans in nonagricultural occupations were effected in 1944, according to the War Manpower Commission. This figure includes placements of servicemen of all wars, but of that number more than 550,000 were veterans of World War II, and of these 52,000 were handicapped. For veterans of World War II, the total covers only those placed during the last 10 months of the year (but does not include February totals for Connecticut and Delaware), and with respect to the handicapped covers only those placed during the last 5 months of the year.

[1] War Manpower Commission, Field Instruction No. 628, December 12, 1944.
[3] Data are from War Manpower Commission, Reports and Analysis Service.

On the basis of placements by States, New York stood first but was followed closely by California. Other leading States were Texas, Ohio, Pennsylvania, Illinois, and Washington. From the standpoint of major occupational group in which the veteran was placed, the largest group of the 806,139 veterans placed (393,267) consisted of "unskilled and other." "Semiskilled" and "skilled" followed with 146,840 and 131,253, respectively.

Nonagricultural Placements of Veterans,[1] by Major Occupational Group and State, 1944

War Manpower Commission region and State	Total	Professional and managerial	Clerical and sales	Service	Skilled	Semiskilled	Unskilled and other
United States	806,139	14,445	49,792	70,542	131,253	146,840	393,267
Region I:							
Connecticut	9,142	246	669	710	1,237	2,269	4,011
Maine	3,440	27	196	257	424	707	1,829
Massachusetts	23,787	556	1,867	1,848	4,111	4,968	10,437
New Hampshire	1,742	8	135	138	174	494	793
Rhode Island	4,524	72	389	238	794	776	2,255
Vermont	886	37	119	51	127	229	323
Region II:							
New York	70,919	1,703	5,062	12,256	11,543	10,957	29,398
Region III:							
Delaware	1,005	12	62	113	187	197	434
New Jersey	25,585	522	1,932	1,858	4,570	4,783	11,920
Pennsylvania	42,629	830	2,570	2,311	6,732	7,136	23,050
Region IV:							
District of Columbia	3,204	90	475	915	355	597	772
Maryland	13,722	183	845	1,392	1,989	2,240	7,073
North Carolina	15,275	132	980	1,133	2,571	3,849	6,610
Virginia	12,099	160	741	831	2,207	2,571	5,589
West Virginia	10,143	105	406	314	1,456	1,548	6,314
Region V:							
Kentucky	13,980	170	807	795	3,033	2,113	7,062
Michigan	27,457	713	1,379	1,389	4,184	7,957	11,835
Ohio	47,787	741	2,133	2,698	6,051	9,145	27,019
Region VI:							
Illinois	40,525	630	2,156	1,752	4,987	6,068	24,932
Indiana	21,791	242	849	958	2,556	4,044	13,142
Wisconsin	12,907	325	807	575	2,433	2,680	6,087
Region VII:							
Alabama	16,343	132	912	1,028	3,298	2,706	8,267
Florida	17,827	327	1,727	2,246	5,102	3,752	4,673
Georgia	16,757	220	1,342	1,265	3,049	4,201	6,680
Mississippi	7,762	57	504	503	1,172	1,687	3,839
South Carolina	6,094	60	366	472	916	1,376	2,904
Tennessee	22,106	314	1,225	2,413	3,464	2,999	11,691
Region VIII:							
Iowa	12,232	243	859	732	1,491	2,390	6,517
Minnesota	19,606	246	667	943	1,845	2,484	13,421
Nebraska	5,996	68	273	362	734	988	3,571
North Dakota	889	18	50	49	66	197	509
South Dakota	1,487	33	104	121	171	251	807
Region IX:							
Arkansas	8,191	211	655	1,113	868	1,434	3,910
Kansas	7,341	86	499	571	1,539	1,657	2,989
Missouri	21,730	476	1,422	1,890	3,640	4,103	10,199
Oklahoma	11,540	201	701	866	1,657	2,517	5,598
Region X:							
Louisiana	10,721	298	918	1,285	2,309	1,832	4,079
New Mexico	2,931	28	209	369	523	566	1,236
Texas	54,961	1,168	4,094	4,712	10,024	11,373	23,590
Region XI:							
Colorado	7,283	95	480	843	883	1,028	3,954
Idaho	3,374	16	112	238	632	653	1,723
Montana	3,673	36	157	192	759	601	1,928
Utah	4,281	99	383	454	816	905	1,624
Wyoming	952	22	37	33	154	230	476
Region XII:							
Arizona	5,941	96	542	957	1,187	1,313	1,846
California	69,678	1,907	4,886	7,274	13,284	12,067	30,260
Nevada	2,601	11	79	410	442	343	1,316
Oregon	21,976	161	543	1,946	3,007	3,515	12,804
Washington	39,317	312	1,467	4,723	6,500	4,344	21,971

[1] Includes placements of veterans of all wars.

Industrial Injuries

Industrial Injuries in 1944: Preliminary Estimates [1]

ABOUT 2¼ million workers were disabled because of work injuries during 1944, according to preliminary estimates of the Bureau of Labor Statistics. The total estimate of 2,230,400 injuries is about 7.7 percent below the estimate of 2,414,000 for 1943, and marks the reversal of the upward trend which had continued steadily from 1938 through 1943. Employment is estimated to have decreased by only about 3 percent from the 1943 level.

During a year marked with acute manpower shortages and increasingly heavy demands by the country's armed services, industrial injuries caused an actual time loss estimated at 43,614,400 employee-days. If to this figure are added the standard economic time charges for deaths and permanent impairments so as to allow for the ultimate loss which will be occasioned by work injuries which occurred in 1944, the total time loss rises to 222,944,000 employee-days. This is the equivalent of full-time employment for an entire year for 743,000 persons. The equivalent of the more than 43 million days of actual time loss is full-time annual employment for 145,000 workers. Whereas the larger figure charges against 1944 the losses of working capacity which extend into future years, the smaller figure represents time actually lost during 1944.

Industrial fatalities decreased more sharply than the other types of work disabilities. The estimated total of 15,900 is nearly 14 percent below the estimate of 18,400 for 1943. Most of the decrease occurred in construction and is directly traceable to the sharp curtailment of construction activities and the resultant sharp decrease in employment.

There is no change from the 1943 estimate of 1,700 permanent total disabilities. Permanent partial impairments, however, are estimated to have decreased from the 1943 level of 108,000 to 94,400. Similarly, the estimate of 2,118,400 temporary total disabilities is about 7 percent below the 1943 figure of 2,285,900.

Although agricultural employment decreased somewhat during 1944 (by about 2 percent) other considerations indicate that the 1943 estimate of 311,900 work injuries probably holds for 1944 and that there was no good reason for altering the estimates of the various types of disabilities. The estimate of agricultural fatalities, 4,800, therefore still exceeds that for any other industrial group. It must be noted, however, that the data for work injuries in agriculture are fragmentary, a fact which makes the task of estimating both difficult and subject to a considerable margin of error.

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[1] Prepared in the Bureau's Industrial Hazards Division by Max D. Kossoris and Frank S. McElroy.

The estimate of 786,900 disabilities in manufacturing exceeds that for any of the other industrial groups. This figure represents a decrease of nearly 2 percent from the 1943 estimate. It is important to note, in this connection, that decreases took place both in the total number of work injuries and in the relative incidence of such injuries, as measured by the frequency rate. The cumulative rate for the first 9 months of 1944 was below the rate for the same period in 1943; but whereas the total of 1944 fatalities (2,900) was below the 1943 figure (3,100), permanent impairments (35,400) slightly exceeded the 1943 estimate (34,100). The number of 748,300 temporary total disabilities is only about 2 percent below the 1943 total of such injuries.

The estimates indicate relatively little injury change in mining and quarrying, in public utilities, and in the group of services, government, and miscellaneous industries. Such changes as occurred, however, were downward. Sharper decreases were noted in miscellaneous transportation.

Estimated Number of Disabling Injuries During 1944, by Industry Groups

Differences between number of total injuries and injuries to employees represents injuries to self-employed workers]

Industry group	All disabilities		Fatalities		Permanent total disabilities		Permanent partial disabilities		Temporary total disabilities	
	Total	To employees	Total	To employees	Total	To employees	Total	To employees	Total	To employees
All groups	2,230,400	1,802,100	15,900	11,200	1,700	1,400	94,400	76,000	2,118,400	1,713,500
Agriculture [1]	311,900	75,400	4,800	1,200	400	100	15,600	3,700	291,100	70,400
Mining and quarrying [2]	92,100	87,300	1,700	1,600	200	200	4,000	3,800	86,200	81,700
Construction [3]	99,600	60,000	1,100	700	100	100	3,600	2,200	94,800	57,000
Manufacturing [4]	786,900	773,500	2,900	2,800	300	300	35,400	34,800	748,300	735,600
Public utilities	19,300	19,300	400	400	(5)	(5)	500	500	18,400	18,400
Trade [3]	273,800	219,000	700	600	100	100	6,000	5,000	267,000	213,300
Railroads [6]	92,400	92,400	1,200	1,200	300	300	6,400	6,400	84,500	84,500
Miscellaneous transportation [3]	135,100	116,000	900	700	100	100	4,100	3,500	130,000	111,700
Services, government, and miscellaneous industries [3]	419,300	359,200	2,200	2,000	200	200	18,800	16,100	398,100	340,900

[1] Based on fragmentary data.
[2] Based largely on Bureau of Mines data.
[3] Based on small sample studies.
[4] Based on comprehensive survey.
[5] Less than 50.
[6] Based on Interstate Commerce Commission data.

A very sharp decrease was estimated for construction. There was practically no heavy construction or highway construction during 1944, and little building construction. The types of activities carried on during the year were largely in the nature of repairs. The decrease in construction accidents therefore was due to two factors—(1) that a sharp decrease occurred in employment, and (2) that the remaining type of activity was much less hazardous than construction work is normally. There is also some reason to believe that not enough weight was allowed for the changing character of construction activities during 1943 when estimates for that year were made, and that the 1943 estimates for this industry may have been somewhat higher than was justified.

On the other hand, in the railroad and trade groups, disabling injuries appear to have increased although in neither case was the in-

crease very marked. Injuries in trade are estimated to have increased by about 5,000 over 1943, for a total of 273,800 in 1944. Railroad injuries increased from 85,400 to 92,400. This rise was much less than that in 1943 over 1942, but the same factors—congestion, deterioration of equipment, and the necessity for faster handling of freight—were responsible for the continued upward trend in 1944.

Work Injuries to Women in Shipyards, 1943–44 [1]

Summary

THE introduction of several hundred thousand women workers into shipyards raised the question as to whether the customary types of safety precautions applicable to men were equally applicable to women, or whether the employment of women gave rise to accident problems of a different nature.

At the request of the Maritime Commission, the Bureau of Labor Statistics undertook a survey of accidents to women in work activities in shipyards in which both men and women were employed, in order to determine whether there were any significant differences. The survey covered a total of 3,791 disabling injuries experienced over a period of 1 year in selected departments of nine shipyards. In all nine yards women were employed as welders and burners, in three yards in assembly operations, and in two yards in electrical and sheet-metal work.

In nearly every department studied, women experienced relatively more disabling injuries than men. In welding and burning operations, the injury-frequency rate for women was 64.6, against 41.3 for men. In assembly work, the composite rate for three yards was 74.6 for women and 58.5 for men. In sheet-metal work, the comparable rates for women and men were 92.1 and 50.3. Women made the best showing in electrical shops, with a rate of 39.1 as against a rate of 35.6 for men. The reason for this better experience appears to be that work in the electrical shops is of a repetitive and routine nature and lends itself more easily to close supervision. Work in the welding and burning and assembly operations involves considerable climbing about and, frequently, working in strained and awkward positions.

On the whole, women were more careful to wear goggles and suffered fewer eye injuries than men. On the other hand, they fell much more frequently, both from elevations and on level surfaces. Insecure footing appears to be one of their greatest difficulties.

Unaccustomed to strenuous work involving the larger muscles, women suffered proportionately more strains and sprains, particularly of the back. They also injured the legs and feet much more frequently than did the men.

Other outstanding findings from this survey are that women frequently absent themselves from work for injuries which men regard as minor. In welding operations the percentage of all injuries which women regarded as disabling, or for which they were told to stay away from work, was nearly twice as high as for men. In assembly opera-

[1] Prepared in the Bureau's Industrial Hazards Division by Max D. Kossoris. The field work was under the direction of George R McCormack.

tions the percentage which disabling injuries were of total injuries was nearly half again as high for women as for men.

Further, on the average, injured women tended to absent themselves for longer periods, a point which was particularly notable in welding operations. The fact that this work is done out in the open, subject to inclement weather, may also have been a factor.

The problem of clothing does not appear to have been an appreciable problem, probably because most women workers wear slacks. The two sexes appeared to be equally at fault in not wearing proper shoes.

Purpose and Scope of Survey

The employment of women in shipyards is a very recent development. Except for office work, jobs in shipyards in the past were considered too difficult for women. With the tremendous expansion in the shipbuilding program, however, the adoption of mass-production techniques, and the concomitant shortage of male labor, women have taken jobs in shipyards in large numbers. Although exact figures are not available, a reasonable estimate places the number of women wage earners in shipyards at about 150,000 in November 1944.

The introduction of women workers raised a number of problems for shipyard managements. Whereas many of the new male employees had had some prior experience in other manufacturing activities before joining the shipyards, many of the women employees had come from homes, offices, or sales floors and were entirely without industrial experience. They not only had to be taught how to carry on operations they had never performed before, and had probably never even seen before, but also had to work in an environment vastly different from any in their experience.

Aside from the task of training these new workers, management had the task of keeping them from getting hurt. Obviously, there was no point in attracting and training new workers for urgent production tasks only to have them laid up because of injuries. Further, a bad accident experience was no asset to the yard in its attempt to attract and hold an adequate work force.

Many of the safety engineers in shipyards viewed the mass introduction of female workers with considerable misgiving. It was hard enough to maintain a good accident record in yards employing only men. What would happen when all these women were exposed to hazards and tasks entirely foreign to them? What would happen to the accident records of the men with women around to distract their attention?

As expected, the combination of accelerated production and the utilization of a great many inexperienced workers resulted in a considerable increase in the incidence of work injuries. In 1940, the frequency rate was 20.6. In 1942 it was 33.1 However, the insistence of the Maritime Commission and the Navy on the maintenance of safety organizations adequate to cope with the problem, combined with progressive success of the yards themselves in learning how to prevent accidents, has resulted in a sharp reduction in the accident rate. Whereas the records of the Bureau of Labor Statistics indicate 33 disabling injuries per million employee-hours worked in 1942—or

roughly 33 such injuries per year for each 500 workers—the frequency rate for 1944 was only about 23; this was a reduction of about 30 percent over a period of only 2 years.

Safety engineers found that, in time, men accustomed themselves to having women workers about them and to regard them as co-workers; frequently they insisted that the women do all of the tasks incident to their occupations, even if they involved heavy or disagreeable operations. Nevertheless, it was apparent that the prevention of work injuries to women involved some variations from the practices normally used for men, even though the general features of the safety programs applied equally to workers of both sexes.

At the request of the Maritime Commission, the Bureau of Labor Statistics studied the work-injury experience of women in nine large shipyards. The yard departments selected for study employed about 31,600 workers who experienced a total of 3,791 disabling work injuries during a period of 1 year. In most of the shipyards surveyed, this period extended from July 1943 through June 1944.

The purpose of the survey was to determine how the accident experience of women compared with that of men doing the same work and, if possible, to determine the reasons for differences. Office workers were excluded from the study. The occupations studied included only those on which both men and women were employed and on which job assignments were made regardless of sex.

As there were considerable differences between the yards in the types of available records and in the proportion of women employed in the different departments, the various phases of the survey were not based on all of the nine yards. It was possible to study the experience of welders and burners in all of the nine yards, as each of them employed a relatively large proportion of women in these occupations. Assembly operations could be studied in three yards, and electrical departments and sheet-metal departments in two yards each.

Comparative Injury Rates

The largest numbers of female workers were employed in welding and burning operations. As is apparent from table 1, the frequency rate of work injuries of women workers exceeded that of men in each of 8 yards, and was not substantially lower in the ninth (yard No. 2). For the entire group, women welders and burners suffered 1,061 disabling injuries for a total exposure of nearly 16½ million employee-hours. For more than twice this number of hours, about 37½ million, men experienced 1,554 such injuries. The frequency rate of work injuries of women (64.6) was half again as high as that of men (41.3). In one of the yards, No. 7, the rate for women was 123.4; in that yard, however, the rate for men was also very high, 92.4. In each of the yards, except No. 2, the frequency rate for women substantially exceeded that for the men.

However, the severity rate, that is, the average number of days lost for each thousand employee-hours worked, discloses little difference between the sexes. There are no persistent differences, and the rates for the entire group—1.5 for men and 1.6 for women—are nearly identical.

TABLE 1.—*Injury Rates in a Group of Shipyards, by Department and Sex*

Department and shipyard	Males						Females					
	Employee-hours worked	Number of disabling injuries	Time charges (days)	Injury rates[1]		Average days of temporary disability	Employee-hours worked	Number of disabling injuries	Time charges (days)	Injury rates[1]		Average days of temporary disability
				Frequency	Severity					Frequency	Severity	
Welding and burning	37,592,773	1,554	56,103	41.3	1.5	12	16,433,322	1,061	26,465	64.6	1.6	17
Yard 1	3,404,865	132	8,255	38.8	2.4	15	831,607	60	944	72.1	1.1	16
Yard 2	7,148,033	296	15,872	41.4	2.2	9	1,299,420	48	4,540	36.9	3.5	11
Yard 3	2,875,587	132	1,533	45.9	.5	12	1,446,041	115	1,601	79.5	1.1	14
Yard 4	3,550,302	80	4,613	22.5	1.3	20	1,448,309	82	1,909	56.6	1.3	20
Yard 5	6,485,217	99	8,905	15.3	1.4	30	3,904,916	125	4,528	32.0	1.2	36
Yard 6	4,949,519	94	1,922	19.0	.4	17	1,965,601	88	1,725	44.8	.9	20
Yard 7	2,023,839	187	1,869	92.4	.9	10	1,134,794	140	6,401	123.4	5.6	17
Yard 8	2,952,289	201	7,608	68.1	2.6	7	1,637,626	135	1,418	82.4	.9	11
Yard 9	4,203,122	333	5,526	79.2	1.3	9	2,765,008	268	3,399	96.9	1.2	13
Assembly	7,815,718	457	9,394	58.5	1.2	10	4,854,561	362	12,674	74.6	2.6	12
Yard 1	1,551,448	68	1,194	43.8	.8	18	375,817	17	4,281	45.2	11.4	18
Yard 8	1,816,189	131	1,148	72.1	.6	7	867,750	83	709	95.6	.9	10
Yard 9	4,448,081	258	7,052	58.0	1.6	10	3,610,994	262	7,594	72.6	2.1	12
Electrical	4,356,433	155	4,993	35.6	1.1	17	1,459,389	57	1,777	39.1	1.2	18
Yard 6	2,456,987	51	1,647	20.8	.7	21	835,939	18	1,251	21.5	1.5	29
Yard 7	1,899,446	104	3,346	54.8	1.8	15	623,450	39	526	62.6	.8	13
Sheet-metal	1,888,522	95	903	50.3	.5	10	542,854	50	511	92.1	.9	10
Yard 3	1,092,525	45	456	41.2	.4	10	213,265	8	94	37.5	.4	12
Yard 7	795,997	50	447	62.8	.6	9	329,589	42	417	127.4	1.3	10

[1] The frequency rate is the average number of disabling injuries for each million employee-hours worked. The severity rate is the average number of days lost for each thousand employee-hours worked. The standard time-loss ratings for fatalities and permanent disabilities are given in Method of Compiling Industrial Injury Rates, approved by the American Standards Association, 1937.

In nearly every yard the average duration per temporary disability was greater for women than for men. For all yards combined, the average duration per temporary disability for women injured was nearly half again as long as for men, as indicated by averages of 17 and 12 days.

In the three assembly departments surveyed, the relative experience of the two sexes nearly duplicated that in the welding and burning operations. For every million employee-hours worked, women averaged 74.6 disabling injuries against 58.5 for the men. The accident experience of women workers was worse than that of the men in each of the three yards.

Although there was little difference in the average duration per temporary total disability, women had a severity rate of 2.6—more than twice as high as that of 1.2 for the men.

In the two electrical departments, however, the accident experience of women was not substantially worse than that of men. The frequency rates for the two groups were 39.1 and 35.6. The severity rates, 1.2 and 1.1, were nearly alike, and there was not much difference in the average duration per temporary disability—18 days for women and 17 days for men.

The experience of women in the two sheet-metal departments was worse even than in welding and burning. The frequency rate of women in sheet-metal work was 92.1, against 50.3 for the men. The number of women in these operations, however, was very much smaller, as indicated by a total exposure of nearly 2½ million hours in welding and only about ½ million in sheet-metal operations.

As the severity rates of 0.9 and 0.5 indicate, most of these injuries were minor. This is further borne out by the low average duration per temporary total disability, which was 10 days for each sex.

The explanation for the adverse experience of women in welding and burning, assembly, and sheet-metal operations appears to lie in the nature of the work. In the electrical departments, operations were routine, repetitive, fairly light, and usually performed at benches. This was not the case in the work in the other three types of departments, and particularly in welding and assembly operations. There the operations frequently require working in awkward and strained positions, a good deal of climbing about, pulling of welding lines, and frequent stepping over or around lines or materials piled on the various working surfaces. These difficulties appear to be more formidable for women than for men, with the result that women were injured relatively more frequently.

UNSAFE ACTS

Safety engineers are particularly interested in unsafe acts, because these are more difficult to control than unsafe conditions. Whereas the latter usually can be corrected through mechanical means, the correction for the former depends on educating and training employees to work safely, and then having competent and safety-minded supervisors see that work is done in accordance with the training.

Analysis of the unsafe acts on the part of women and men, which brought about either permanent or temporary disability, proved to be very revealing. The analysis had to be restricted to the welding and burning departments of all nine yards and the assembly departments of three yards.

TABLE 2.—*Frequency Rates of Unsafe Acts Resulting in Disabling Injuries in Shipyards, by Sex*

Unsafe act	Welding and burning department [1]				Assembly department [2]			
	Number of disabling injuries to—		Frequency rate		Number of disabling injuries to—		Frequency rate	
	Males	Females	Males	Females	Males	Females	Males	Females
Unsafe use of equipment	143	134	4.4	9.2	75	58	10.6	12.3
Pulling welding lines	42	61	1.3	4.2	12	33	1.7	7.1
Using defective equipment					7	4	1.0	.8
Incorrect use of equipment	38	34	1.2	2.3	10	4	1.4	.8
Insecure gripping or taking wrong hold	47	29	1.4	2.0	46	17	6.5	3.6
Other unsafe uses	16	10	.5	.7				
Failure to use personal safety devices	485	233	14.9	16.0	140	72	19.8	15.3
Goggles	379	156	11.6	10.7	133	56	18.8	11.9
Gloves	40	13	1.2	.9				
Safety shoes	22	38	.7	2.6		6		1.3
Other	44	26	1.4	1.8	7	10	1.0	2.1
Unsafe position or posture	356	282	10.9	19.4	117	131	16.5	27.8
Exposure to suspended load					5	2	.7	.4
Exposure to falling objects	14	11	.4	.8	17	6	2.4	1.3
Inattention to footing	232	199	7.2	13.6	77	107	10.9	22.7
Jumping, running	15	14	.5	1.0	6	6	.8	1.3
Other	95	58	2.9	4.0	12	10	1.7	2.1
Lifting incorrectly	30	20	.9	1.4	12	8	1.7	1.7
Other unsafe acts	18	12	.5	.8	6	2	.8	.4
No unsafe acts	317	258	9.7	17.8	64	80	9.1	17.0

[1] In 9 shipyards.

[2] In 3 shipyards.

In the welding and burning departments, men and women were nearly equally at fault in not using personal protective devices. Most important was the failure to wear goggles when welding or burning operations were being performed, particularly when this work was done by operators other than those injured.

The most notable difference between the sexes was found in the failure to work in the correct position or posture. Whether because of anatomical differences or because of lack of skill, women experienced 19.4 disabling injuries traceable to this cause for every 10.9 of the men. As table 2 indicates, the greatest difficulty of women was inattention to secure footing—i. e., stumbling over materials, etc. Women had twice as many injuries from this cause as did men, in terms of a uniform exposure base.

Women violated safety rules pertaining to the use of equipment more than twice as frequently as men, as indicated by the frequency rates of 9.2 and 4.4. Most serious was the unsafe pulling of welding lines.

In the two assembly departments, the failure of women to use safe working postures or positions was again the outstanding difference. For a frequency rate of 16.5 for men for disabling injuries resulting from this practice, women had a rate of 27.8. Again the most notable difference was inattention to footing.

In the unsafe use of equipment, men were at fault about as frequently as women, as the frequency rates of 10.6 and 12.3 indicate. As in the case of welding operations, women experienced their greatest difficulties with unsafe methods of pulling welding lines. Injuries from this cause were relatively more than four times as numerous as for men.

Women scored decidedly better, however, in the use of personal protective equipment. They utilized their protective goggles more frequently than did the men, who experienced relatively half again as many injuries as women because of this unsafe act. The frequency rates of injuries caused by failure to use goggles were 11.9 for women, and 18.8 for men.

Women were no more guilty of unsafe lifting practices than were men, if the resulting injury-frequency rates are reliable measures of this frequent safety violation. Interestingly, too, neither sex had many injuries due to this cause.

ACCIDENT TYPE

The most notable difference in the relative frequencies of accident types for the two sexes was observed for the two types of falls. Women fell twice as frequently to lower levels and nearly three times as frequently on the same level. This general observation was true for both welding and assembly departments. Women fell half again as frequently from stagings and scaffolds when engaged in welding and burning operations. There was very little difference, however, in the assembly work; in fact, the frequency rate for women was fractionally lower. On the other hand, women fell three times as frequently from other working surfaces in assembly work, and twice as frequently in welding operations. Pointing to the same type of difficulty is the frequency rate of falls on stairways, which was 1.5 for women and 0.2 for men.

Slips, which generally resulted in strains, were about twice as frequent for women in welding, but not much more frequent in assembly work. However, women burned themselves twice as frequently as men in assembly work.

A marked difference between the two types of departments was noted as regards accidents in which workers were struck by objects. In welding and burning, women experienced this type of accident about one-quarter again as often as men. In assembly operations, however, men had this type of accident twice as frequently as women. The most marked difference was for accidents in which foreign particles entered the eye, and for which the obvious preventive safe practice is the wearing of impact goggles. As pointed out earlier, men violated this rule more frequently than women. As a consequence, the frequency rate for this type of accident was only 3.9 for women, but 11.9 for men.

TABLE 3.—*Frequency Rates of Disabling Injuries in Shipyards, by Accident Type and Sex*

Accident type	Welding and burning department [1]				Assembly department [2]			
	Number of disabling injuries to—		Frequency rate		Number of disabling injuries to—		Frequency rate	
	Males	Females	Males	Females	Males	Females	Males	Females
Striking against	139	81	3.7	5.0	26	30	3.3	6.2
Metal stock	41	29	1.1	1.7	14	12	1.8	2.5
Ship hulls	32	22	.9	1.4				
Other objects	66	30	1.7	1.9	12	18	1.5	3.7
Struck by	444	249	12.0	15.2	215	71	27.5	14.6
Hand tools	27	16	.7	1.0	27	6	3.4	1.3
Foreign bodies (eye)	210	53	5.7	3.2	93	19	11.9	3.9
Metal stock	108	103	2.9	6.3	59	36	7.5	7.4
Other objects	99	77	2.6	4.7	36	10	4.6	2.1
Caught in, on, or between	25	17	.7	1.0	9	4	1.2	.8
Falls on same level	144	166	3.9	10.1	67	110	8.6	22.7
On working surface	85	109	2.3	6.6	44	83	5.7	17.1
On other surfaces	59	57	1.6	3.5	23	27	2.9	5.6
Falls to different level	188	171	5.0	10.5	32	49	4.1	10.1
From stagings, scaffolds	76	53	2.1	3.2	8	4	1.1	.8
From other working surfaces	36	31	1.0	1.9	18	29	2.3	6.0
From ladders	31	23	.8	1.4				
On stairways	9	25	.2	1.5				
From other surfaces	36	39	1.0	2.4	6	16	.8	3.3
Slips (not falls) and other exertion	183	145	4.9	8.8	54	38	6.9	7.8
On working surfaces	67	43	1.8	2.6	23	13	2.9	2.7
Other surfaces	116	102	3.1	6.2	31	25	4.0	5.1
Contact with temperature extremes	259	137	6.9	8.4	29	35	3.7	7.3
Sparks	216	100	5.8	6.1	21	29	2.7	6.0
Other	43	37	1.2	2.3	8	6	1.1	1.3
Welder's flash	136	80	3.6	4.9	24	25	3.1	5.1

[1] In 9 yards.
[2] In 3 yards.

NATURE OF INJURY

In each of the four departments shown in table 4, men suffered more injuries to eyes because of foreign particles than did women. In welding work, the percentage of such eye injuries was nearly three times as frequent for men, and in assembly and sheet-metal work more than four times as frequent. In electrical work, where this hazard is not nearly so pronounced, 5.2 percent of the injuries to men were due to this type of accident, against 3.5 percent for women.

Whereas in welding men were burned more frequently than women, women suffered more strains and sprains, and half again as many bruises; the latter was true for assembly operations and sheet-metal work. In the electrical departments, however, the reverse was true of bruises. These comprised fully a third of all injuries to men, but only a fourth of the injuries to women.

In three of the four types of departments men suffered a greater percentage of welder's flash injuries. Only in assembly work did women have proportionally more flash injuries.

Although the percentage of injuries which resulted in hernias is small, it is significant that nearly all of them were sustained by men. The likely explanation for this is that women generally do not attempt to lift loads which seem too heavy for them to handle. It is also possible, of course, that they were not required to handle the heavier pieces.

TABLE 4.—*Percentage Distribution of Disabling Injuries in Shipyards, by Nature of Injury and Sex*

Department and sex	Total number of disabling injuries	Percent of disabling injuries resulting from—									
		Foreign body in eye	Amputations	Burns and scalds	Cuts and lacerations	Strains and sprains	Bruises	Fractures	Hernia	Welder's flash	Other
Welding and burning: [1]											
Males	1,554	14.6	0.3	18.4	9.8	14.9	22.3	8.3	1.1	8.8	1.5
Females	1,061	5.5	.1	13.7	7.9	20.1	33.6	10.2	.1	7.6	1.2
Assembly: [2]											
Males	457	23.3	.4	6.4	9.5	12.6	26.7	13.4	2.2	5.3	.2
Females	362	5.2	.0	10.2	11.0	18.8	36.3	11.0	.6	6.9	.....
Electrical: [3]											
Males	155	5.2	.6	1.9	17.4	23.9	33.1	9.0	4.5	2.6	1.8
Females	57	3.5	1.8	5.3	21.1	31.5	26.3	10.5	.0	.0	.....
Sheet metal: [2]											
Males	95	8.4	.0	4.2	30.5	16.8	29.5	1.1	.0	6.3	3.2
Females	50	2.0	.0	.0	18.4	20.4	44.8	4.1	.0	4.1	6.2

[1] In 9 shipyards.
[2] In 3 shipyards.
[3] In 2 shipyards.

BODY PART INJURED

An analysis correlative to nature of injury is that for the body parts affected. This is shown for all four types of departments in table 5.

The difference in eye injuries has been pointed out earlier. Table 5 shows that in each of the four departments men injured their eyes at least twice as frequently as women.

Where the work involved lifting and general handling of heavy materials, women suffered considerably higher percentages of back injuries. Only in the electrical shops, where the work performed by women was not heavy, did men have a larger proportion of back strains.

Men had higher proportions of finger injuries in the assembly and sheet-metal shops. There was very little difference between the sexes in this respect in welding operations. In the electrical departments, however, the proportion of finger injuries was more than twice as great among the women as among the men.

Among the most significant differences shown in table 5 are the relative proportions of injuries to the foot or leg. Invariably women

had a higher percentage of such injuries, and in several instances very much higher percentages. Many of these injuries to women were directly due to slipping or falling over objects which obstructed walkways, and are indicative of the greater difficulty experienced by women in overcoming this hazard.

TABLE 5.—*Percentage Distribution of Disabling Injuries in Shipyards, by Body Part Injured and Sex*

Department and sex	Total number of disabling injuries	Percent of disabling injuries to body part						
		Eye	Skull	Head, other	Chest	Back	Abdomen	Hip
Welding and burning: [1]								
Males	1,554	30.0	3.4	6.6	4.1	8.2	1.8	1.2
Females	1,061	16.5	3.8	6.6	3.9	12.2	.7	1.8
Assembly: [2]								
Males	457	33.5	2.4	4.0	3.7	7.3	2.4	1.3
Females	362	16.6	1.4	4.7	6.4	11.0	1.1	1.9
Electrical: [3]								
Males	155	10.3	1.9	5.2	4.5	14.3	5.2	3.2
Females	57	3.5	5.3	1.8	5.3	10.5	1.8	1.8
Sheet metal: [3]								
Males	95	15.8	4.2	6.3	4.2	6.3	1.1	----
Females	50	6.0	10.0	6.0	2.0	10.0	2.0	----

Department and sex	Percent of disabling injuries to body part—Continued								
	Shoulder	Trunk, other	Fingers	Hand	Arm	Toes	Foot	Leg	Other
Welding and burning: [1]									
Males	1.8	1.1	3.6	6.6	5.2	3.5	10.3	11.6	1.0
Females	2.1	1.9	3.2	6.0	4.4	3.8	15.5	17.0	.6
Assembly: [2]									
Males	2.0	1.3	6.4	4.2	1.1	6.2	11.0	12.3	.9
Females	1.1	3.6	2.8	3.3	2.2	3.6	15.7	24.3	.3
Electrical: [3]									
Males	4.5	1.9	7.1	10.3	5.8	2.6	11.6	11.6	----
Females	1.8	5.3	15.8	5.3	1.8	3.5	22.4	12.3	1.8
Sheet metal: [3]									
Males	4.2	----	19.9	12.6	1.1	4.2	7.4	11.6	1.1
Females	2.0	----	10.0	14.0	2.0	8.0	10.0	14.0	4.0

[1] In 9 shipyards.
[2] In 3 shipyards.
[3] In 2 shipyards.

SHIFT DIFFERENCES

In four shipyards it was possible to study shift differences in the injury occurrence to men and women.

On each shift the accident-frequency rate for women was at least twice as high as for men. On the whole, the rates for each shift do not point to any great safety advantage in any one shift. The differences in frequency rates between shifts are not significant, either for men or for women. What advantage there is lies with the second shift, which shows lower injury-frequency rates for both men and women. The reasons for the higher rates of the day shift as compared with rates on the afternoon and evening shift may be the greater congestion and the hazard to workers from operations carried on by many more co-workers. The higher rates for the night shift may be due to poorer illumination. The second shift has less congestion than the day shift and better light, for part of the day, than the night shift.

TABLE 6.—*Frequency Rates of Disabling Injuries in Shipyards, by Shift and Sex* [1]

Shift	Male workers				Female workers			
	Employee-hours worked	Number of disabling injuries	Frequency rate	Average duration per temporary disability (days)	Employee-hours worked	Number of disabling injuries	Frequency rate	Average duration per temporary disability (days)
Day	6,940,763	171	24.6	17	3,792,387	182	48.0	22
Afternoon and evening	6,320,865	131	20.7	20	3,126,313	136	43.5	24
Night	4,598,907	103	22.4	21	1,852,095	90	48.6	23

[1] In 4 shipyards.

DISABLING VERSUS NONDISABLING INJURIES

Of nearly 39,000 injuries to male workers in the welding and burning departments, only 380 were so severe that the men had to be absent from work. Women absented themselves in nearly as many instances (342) out of a total of only 19,135 injuries. Whereas only 1.0 percent of the injuries to men required them to take off one or more days, this was the case in 1.8 percent of all injuries to women. In other words, for the same number of injuries, women absented themselves about twice as frequently.

Although the percentages of disabling injuries were much higher in assembly work than in welding, the difference between the sexes was not so marked. For the men, 4.8 percent of all injuries were disabling; for women, 6.5 percent.

In conjunction with the facts pointed out earlier, these figures warrant the conclusion that women absent themselves from work more easily than men, and that men report for work even when they have injuries for which women tend to take time out. Furthermore, injured women are absent for a longer period, as was apparent from table 1.

TABLE 7.—*Disabling and Nondisabling Injuries in Shipyards, by Sex*

Department	Male workers				Female workers			
	Total injuries	Number of nondisabling injuries	Number of disabling injuries	Percent disabling	Total injuries	Number of nondisabling injuries	Number of disabling injuries	Percent disabling
Welding and burning [1]	38,854	38,474	380	1.0	19,135	18,793	342	1.8
Assembly [2]	2,722	2,591	131	4.8	1,270	1,187	83	6.5

[1] In 3 shipyards.
[2] In 1 shipyard.

Social Security

Federal Social Security and Related Programs in the United States in 1943

BY THE end of 1943 the five major retirement systems in the United States—those for Federal employees, State and local Government employees, railroad workers, and veterans, and the Federal old-age system—were making payments to a total of 772,200 beneficiaries, the largest group being the 411,400 in receipt of Federal old-age and survivors insurance. Average monthly benefits ranged from $23 under the Federal old-age system to $86 for employees retired from Federal civil service. Over 400 million dollars was paid under the five systems in 1943, the largest amount (nearly 125 million dollars) being paid to former employees of State and local governments. Some 377 million dollars was paid in workmen's compensation for industrial injuries, and unemployment-insurance payments totaled 81 millions.

Coverage of Systems

The Federal Social Security Act of 1935 introduced the first general social-insurance system in this country. Although the act did not protect all segments of the population against all major threats to economic security—disability being a notable exception—it laid the ground work upon which a comprehensive social-insurance system eventually could be built. In 1943 large groups of workers still were almost or wholly unprotected by any form of social insurance. These groups included agricultural and domestic workers and the self-employed, who had been excluded initially from the basic system of the Social Security Act mainly in order to aid administration in its first years. Most of these persons are excluded also from workmen's compensation. At the end of 1943 the Federal system, through old-age and survivors insurance, covered about three-fifths of all employment in the United States, according to a recent report of the Social Security Board,[1] from which the data in this article are taken.

Other groups of the population are covered, for various hazards, by special systems which operate independently of the Social Security Act; among these are the Railroad Retirement and Railroad Unemployment Insurance systems, the Federal Civil Service Retirement and Federal Employees' Compensation systems, the State and local retirement programs, benefits for war veterans, and the State workmen's compensation systems.[2]

The report notes that railroad employees receive some compensation for the wage loss resulting from old age or unemployment, but their

[1] Social Security Yearbook, 1943 (Federal Security Agency, Social Security Board, Washington, 1944).
[2] Only programs of a public nature were included in this study.

special systems provide inadequate insurance against disability or death. Federal employees have old-age and accident protection but no unemployment insurance; protection of their survivors is extremely limited. Almost all State and local employees are without protection against unemployment, and only slightly more than half are covered by public retirement systems; provisions for insurance against disability and death vary widely from system to system. Most commercial and industrial workers, Federal employees, and a substantial number of State and local government employees are protected against both wage losses and medical costs which are due to work-connected injuries.

Benefits Paid for All Types of Social Insurance, 1942 and 1943

The increase in the income of the majority of civilians in 1943—shown in the rise of per capita income to the unprecedented figure of $1,031—and the low level of unemployment caused social-security expenditures in the United States as a whole to decline during the year. Payments to individuals under social insurance and related programs, as shown in table 1, dropped to 1.7 billion dollars in 1943, the smallest amount for any year since 1939 and a decrease of 8 percent from 1942 payments.

The full employment of a war year affected most directly the unemployment-compensation systems of the country. Benefits paid under the State unemployment-compensation laws and under the Railroad Unemployment Insurance Act were less than in any other year of full operation, and were only about a seventh of the amount paid in the peak year 1940. State unemployment-compensation payments dropped to less than one-fourth of their 1942 aggregate (from 344 million to 80 million dollars). Unemployment insurance paid to railroad workers in 1943 dropped to one-sixth of the amount paid in 1942, because of the heavy wartime demands on the Nation's transportation facilities and the consequent urgent need for workers.

Total payments under workmen's compensation laws, however, showed an increase of 15 percent in 1943 over the previous year, as the longer workday, use of less-experienced workers, and peak employment markedly increased the number of industrial accidents. Increased wage rates also influenced total workmen's compensation payments.

The relatively new Federal program of old-age and survivors insurance grew most rapidly of all the programs during 1943, showing a rise of 26 percent in total payments over those in 1942. The rapid growth of these payments reflects the increasing number of workers who had attained insured status before death. Payments would have grown even more rapidly in a year of less plentiful employment, for many persons failed to claim benefits or to receive those already awarded, because they had covered jobs.

The Federal civil-service systems made payments (including refunds) which were 12 percent above those in 1942. Recent amendments have liberalized the provisions for retirement, and extensive turnover of personnel has greatly increased refunds of contributions. A gain of 5 percent in 1943 in payments under State and local retirement systems reflects the rapid rate of increase of systems recently introduced as well as the steady growth of the older systems.

In 1943 total payments of 452 million dollars to disabled or aged veterans, and to the survivors of veterans, exceeded payments made under any of the other social-insurance and related programs and represented 26.5 percent of the total payments made under all programs (table 1). Moreover, the number of beneficiaries and the amounts of payments under the veterans' program, which had changed relatively little in recent years, rose toward the end of 1943 because of World War II casualties.

TABLE 1.—*Social Insurance and Related Payments to Individuals in Continental United States, 1942 and 1943*

[Corrected to May 4, 1944]

Type of payment	Amount (in millions of dollars)		Percentage distribution		Percent of change from 1942
	1943	1942	1943	1942	
All programs	1,703	1,844	100.0	100.0	−7.6
Retirement, disability, and survivor	1,622	1,494	95.2	81.0	+8.6
Old-age and survivors insurance	173	137	10.2	7.4	+26.3
Railroad retirement	133	129	7.8	7.0	+3.1
Federal retirement	162	150	9.5	8.2	+8.0
Civil-service systems	91	81	5.3	4.4	+12.3
Other contributory	1	1	.1	.1	0
Noncontributory [1]	70	68	4.1	3.7	+2.9
State and local governments [1]	325	309	19.1	16.8	+5.2
Veterans' pensions	452	441	26.5	23.8	+2.5
Workmen's compensation	377	328	22.1	17.8	+14.9
Unemployment insurance	81	350	4.8	19.0	−76.9
State systems	80	344	4.7	18.7	−76.7
Railroad system	1	6	.1	.3	−83.3

[1] Estimates furnished by Department of Commerce, Bureau of Foreign and Domestic Commerce.

Retirement and Survivors Benefits

In December 1943, a total of 772,200 monthly retirement benefits was being received under the five programs for which detailed information was available, or 12 percent more than a year earlier (table 2). Payments under these programs increased 10 percent, from nearly 370 million dollars in 1942 to 406 million dollars in 1943.

Old-age and survivors insurance, because of rapid growth during its early years under the Social Security Act and relatively low average benefits, accounted for three-fourths of the net additions to the total retirement rolls during 1943, but for slightly less than half the increase in benefit payments. The number of retirement beneficiaries under the old-age and survivors insurance program increased by 17 percent from December 1942 to December 1943, and comprised 53 percent of all retired beneficiaries at the latter time, as against 51 percent a year earlier. Payments under old-age and survivors insurance for retirement benefits rose 21 percent in 1943 over the previous year. A net total of only 66,000 primary workers was added to the retirement rolls in 1943, compared with 82,000 in 1942, 103,000 in 1941, and 128,000 in 1940.

Job opportunities were open to hundreds of thousands of persons in 1943 who might otherwise have been beneficiaries of old-age and survivors insurance. As of the middle of the year, it was estimated that some 600,000 aged workers and 200,000 wives [3] had not claimed

[3] Old-age and survivors insurance pays monthly retirement benefits to retired workers, to their wives at 65 years of age, and to dependent children under 18.

monthly benefits for which they were eligible. (Similarly, many of the older children and younger widows who would normally have been in receipt of survivors' benefits took jobs.)

Beneficiaries of the veterans' program represented 6 percent of all retirement beneficiaries in both 1942 and 1943, and showed an increase in number of 10 percent in December 1943 over December 1942; payments increased by one-eighth. In December 1943, public employees retired under State and local systems comprised 18 percent of the total number retired; railroad workers, 16 percent; and Federal employees under the civil-service systems, 7 percent.

TABLE 2.—*Retirement and Survivor Beneficiaries, Payments, and Average Monthly Benefits Under Specified Programs, 1942 and 1943*

[Corrected to May 15, 1944]

Program	Retirement annuities					Survivors benefits			
	Beneficiaries (in thousands)		Payments in year (in thousands)		Average monthly benefit, June 1943	Beneficiaries		Payments in year (in thousands)	
	December 1943	December 1942	1943	1942		December 1943	December 1942	1943	1942
All programs	772.2	691.7	$406,316	$369,779	.....	(1)	(1)	$289,521	$254,198
Old-age and survivors insurance	411.4	351.8	97,257	80,305	$23	355,100	264,800	75,593	56,740
Railroad retirement	119.5	115.1	94,797	91,923	66	5,300	5,000	7,264	5,717
Federal civil-service systems	56.2	53.6	56,800	53,195	86	1,510	670	7,381	6,128
State and local governments	136.0	126.7	124,900	115,400	78	(1)	(1)	31,800	30,300
Veterans' pensions	[2] 49.1	44.5	32,562	28,956	[3] 58	326,000	319,200	120,483	115,313
Workmen's compensation	.....	.....	.....	.....	.....	(4)	(4)	47,000	40,000

[1] Not computed; some data not available.
[2] Veterans' benefits based on age were not payable for service in any war after the Spanish-American war.
[3] The amount of the pension payable to veterans with 90 days or more of service at age 65 and over was raised from $60 to $75 by Public Law No. 242 (78th Cong., 2d sess.), March 1, 1944.
[4] Not available.

Survivors' benefits.—Survivor protection under the railroad, Federal civil-service, and the larger State and local retirement systems is limited, since monthly payments to survivors are made only upon election by an annuitant whose benefit is correspondingly reduced.

Not until the Federal Social Security Act amendments of 1939 were passed was survivor protection made available on a broad basis. On January 1, 1944, an estimated 30 million workers had fully insured status under old-age and survivors insurance, entitling their eligible survivors to receive benefit in the event of their death. For another 5 million, who were currently but not fully insured, survivor protection was available to children under 18 and their mothers. Recognition of the Government's obligation to compensate the survivors of men who have served in the armed forces has resulted in greater liberality in the classes of survivors eligible for benefits.[4]

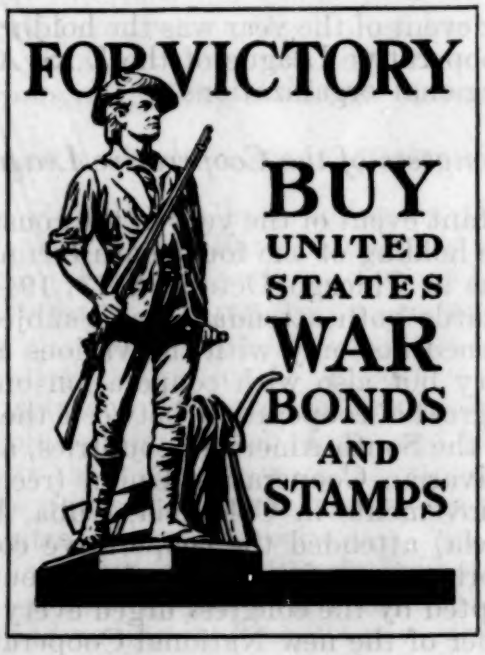
Average monthly survivor benefits are not reported on a comparable basis for all programs. Under old-age and survivors insurance, the average benefit in current-payment status in June 1943 was $20 for an aged widow, $32 for a widow and one child, and $13 for a parent.

[4] For a discussion of eligibility under veterans' and other programs, see Social Security Yearbook, 1943. Federal legislation passed during 1944 will further liberalize pensions to widows and children of deceased veterans, including certain unmarried dependent widows of Civil War veterans.

Benefits payable in June under the veterans' program averaged $33 for a widow who was the sole claimant; $49 for a widow with one or more children;[5] $43 for one parent; and $49 as the combined benefit for two parents. The average monthly benefit paid to the wife of a former railroad employee, based on annuities in force on June 30, 1943, was $32. Relatives of former civil-service annuitants who received monthly benefits in June 1943 under a joint and survivor election received an average of $33.50. The average monthly survivor benefit of $54 paid under State and local government retirement systems is a family benefit. (No data are available to indicate the number of family members sharing the payment.)

All Federal and all but one of the State workmen's compensation laws provide monthly benefits to survivors of a worker whose death results from a work-connected accident or, in a limited number of States, from occupational disease. No comparable statistics are available on payments or beneficiaries under the various State laws. (It is estimated that approximately 47 million dollars was paid to survivors in workmen's compensation cases in 1943, an increase of 18 percent over 1942.)

[5] Under Public Laws 312 (May 27, 1944) and 483 (December 14, 1944) the monthly pension for a widow without children is $35, with one child $45, and $5 for each additional child up to a maximum of $74. If there is no widow, certain specified amounts are applicable to surviving children.



Cooperation

Developments in the Consumers' Cooperative Movement in 1944

Summary

ACCELERATED expansion of goods and services, consolidation of previous advances, and further acquisition of productive facilities took place in the consumers' cooperative movement in the United States in 1944.

Indorsement of the cooperative movement and its objectives was given by an increasing number of organizations in the religious, labor, farmer, social, and political fields. At the other extreme was the attack launched upon the movement by an organization of private businessmen, on the ground of inequality in taxation. Under particular fire was the exemption of patronage refunds—an exemption previously upheld by the courts and again confirmed by the U. S. Tax Court in September 1944. Several other court decisions on various matters, rendered during the year, were also in favor of the cooperatives.

The outstanding event of the year was the holding of the fourteenth congress of the Cooperative League of the U. S. A., whose members are the various regional organizations.

Congress of the Cooperative League

The most important event of the year in the consumers' cooperative movement was the holding of the fourteenth biennial congress of the Cooperative League at Chicago, October 8–13, 1944. This, the largest congress as regards both attendance and subject matter and decisions, was concerned not only with the various aspects of cooperation in this country but also with cooperation on the international level. Presaging greater cooperation between the movement in the United States and the South American countries, a delegation of visitors from the Bolivarian Cooperative Union (recently organized by the cooperative movements in Colombia, Cuba, Ecuador, Panama, Peru, and Venezuela) attended the cooperative congress and visited cooperative enterprises in various parts of the country.

Resolutions adopted by the congress urged every regional wholesale to become a member of the new National Cooperative Finance Association, called for additional investment in cooperatives sufficient to release all cooperative enterprises from "any outside or noncooperative debt," and advocated expansion of cooperative credit unions and banking facilities. A resolution instructing the directors of the Cooperative League (educational) and of National Cooperatives

(wholesaling) to work together for the merger of these organizations into "one strong national cooperative association" failed to pass. The resolution was referred to the board of directors of the two organizations involved, for their joint consideration, with instructions to present recommendations to a special congress of delegates from the two organizations, to be called within a year.

All national and international labor unions were urged to establish within their organizations a consumers' division to promote the development of cooperatives; the cooperative movement would in its turn create a labor division to work with them. Other resolutions called for expansion of cooperative insurance, promotion of voluntary cooperative health services, encouragement of campus cooperatives, closer cooperation with credit unions and rural electricity cooperatives, and (for cooperative employees) a liability and retirement program and the establishment of minimum standards for their health, safety, leisure, and recreation.

In the international field, the congress recommended the creation of a commission to work with representatives of cooperatives in other countries in the western hemisphere in the formulation of a program of education involving the exchange of students, teachers, and employees and the use of radio and educational trips. It favored the creation of a mission to work with cooperatives and United Nations Relief and Rehabilitation Administration in devastated areas; and close cooperation with that agency on reconstruction matters; and urged upon UNRRA, the International Labor Office, and the War Foods Administration the creation of a joint committee on cooperatives to serve as a point of contact with international cooperative organizations. The International Cooperative Alliance was invited to hold its next (1946) congress in the United States.

Developments Among the Local Associations

NEW SERVICES AND FACILITIES

Never since the Bureau has been following the development of consumers' cooperatives in the United States has a greater expansion of services and facilities among local associations been reported.

Opening of new stores by existing store associations or buying clubs was reported from all parts of the country. In territory served by Consumers Cooperative Association 17 self-service stores were opened, 9 of which were departments of oil associations or directly sponsored by them and 5 were combination locker plants and stores; 6 retail units formerly operated by the wholesale were taken over by local cooperatives formed for the purpose. Eleven new stores were opened in the area served by Central States Cooperatives. In the New England and Middle Atlantic States, where 40 new food stores were reported in 1943, it was stated that the rate was considerably greater in 1944; in the 3-month period ending in June, 23 new stores were opened.

In many cases these were branch stores in the same town or nearby communities. Numerous urban associations were in this group. Notable among them were two opened by a Negro grocery cooperative in southern California, two opened by an association in the District of Columbia, and one food store undertaken by an association already operating one food store, seven cafeterias, and a bakery in New York

City. From Texas came reports of both petroleum and cotton-gin associations which, with the encouragement of the wholesale association, are undertaking to handle "farm and home merchandise."

The practice in cooperative distribution in this country has commonly been in the direction of new services rather than in the multiplication of one service in several places. As the urban associations grow, however, they are beginning to change this pattern. Several associations now have attained "chain-store" size (i. e., they operate 4 or more establishments of a single type). Such widening of operations makes the problem of democratic control by the members somewhat more difficult and is giving rise to a practice of holding district meetings, attended by the members in the neighborhood served by each store, at which policies are discussed and delegates to a central membership meeting are elected.

Many associations purchased buildings or land for store or oil-station operation. One association whose property was destroyed by fire, erected a new, modern building equipped with air conditioning. (A small number of associations had already installed this feature.) In a substantial number of cases the purchase consisted of the land, buildings, and business of private dealers in the community. In one case the purchase (by a grocery cooperative) involved a furniture store and undertaking establishment formerly operated privately.

Scattered reports indicated that the movement of oil associations into grocery and other fields continued. In Montana alone, four petroleum associations were reported to have taken this step. Two in Nebraska undertook the operation of both a food store and cold-storage locker plant, and one in Minnesota opened a store to handle groceries, hardware, and appliances. Another petroleum association opened a store to handle groceries, feed, and men's work clothing.

Aside from groceries, possibly the most popular new line of activity in 1944 was the provision of cold-storage lockers for members' supplies of fruit, vegetables, and meat. Such ventures (new associations or new activities of established associations) were voted by cooperatives in at least 15 States (Connecticut, Indiana, Iowa, Kansas, Maryland, Minnesota, Mississippi, Nebraska, New Hampshire, New York, North Dakota, Ohio, Texas, Wisconsin, and Wyoming). Among the reports coming to the notice of the Bureau, North Dakota led with at least 8 associations newly in this field. In numerous other cases, the acquisition of locker facilities was authorized, as soon as materials could be obtained. In many associations the cold-storage service includes not only the cutting and freezing of meat but also the slaughtering of the animal from which the meat is obtained. It may also be noted that at least two grocery-store associations, one in New Jersey and the other in Montana, were reported to have started slaughtering in order to furnish meat for the store.

Other less-usual types of services included a department (in a grocery cooperative) for drugs and sundries, and one for sewing-machine rental (by a feed store). Of five unusual associations, one (the membership of which consists of teen-agers) operates a recreation center, one revives and presents old motion pictures, one operates a nursery school, the fourth (in Texas) purchased land and built an arena where the members practice the roping of steers, and the fifth is a cooperative residence club for war refugees.

Cooperative Distributors and Consumers Book Cooperative, both engaged in mail-order activities, were forced to suspend operations because of supply and manpower difficulties.

A number of mergers of associations took place, usually involving the amalgamation of associations in the same town, which were running different types of merchandising business.

SPECIAL TYPES OF ASSOCIATIONS

Medical-care associations.—In spite of adverse wartime conditions, some progress was made in extension of medical care by cooperative methods. In Detroit, Mich., and in Williston, N. Dak., a health service was being organized in the last quarter of 1944; in both cases the objective was the establishment of a clinic owned by the association. In Detroit a cooperative hospital was regarded as also a possibility, but under the Williston plan existing hospital facilities were to be used. A 35-bed hospital, formerly operated privately, was taken over in November 1944 by a cooperative organized for the purpose in Two Harbors, Minn. The establishment of a cooperative hospital was also being considered in Missouri. In Washington, D. C., the clinic association whose members are Federal employees experienced increasing difficulty, because of war conditions, in maintaining an adequate medical staff. In spite of this, its membership increased.

Among the associations which contract for hospital or medical care, or both, on a prepayment basis but have no facilities of their own, Group Health Mutual, St. Paul, Minn., reported that in 1944 its membership rose from 10,500 to 23,000. Most of this increase was attributed to a new plan of "milk check deductions" undertaken by cooperative creameries to pay the membership dues of their members in the medical-care plan. At the end of the year 24 cooperative creameries had this plan in effect. In Duluth a local union adopted a group health plan under which the premiums were paid by the employers of the unionists.

Insurance associations.—The outstanding event in the insurance branch of the movement was the coordination, climaxing 3 years of planning, of the activities of five of the six life, fire, and automobile insurance associations in the North Central States—Cooperative Insurance Mutual, Cooperators' Life Association, Cooperators Life Mutual, American Farmers Mutual, and Central Mutual Fire Insurance Association. (Midland Mutual Fire Insurance Association, first ratified, then withdrew from the arrangement.) By this action a unified insurance program, covering cooperatives in the States of Wisconsin and Minnesota, was obtained.

The extension of patronage group life insurance continued. Under this plan a cooperative insures the lives of its members, the benefits varying with the amount of the member's patronage of the association during the preceding year. In Minnesota, Cooperators' Life Association reported in June 1944, that 19 associations had taken out such insurance since the beginning of the year, and that a total of 40 associations in the State had policies of this kind, covering over 18,000 members and representing insurance in force of nearly $2,000,000,000.

Electricity and telephone associations.—The REA reported in its Rural Electrification News for September 1944 that some 800 REA

electricity associations were in operation at that time. A report[1] issued about the same time noted, however, that little more than 40 percent of the farms in the United States are electrified, and set forth a 3-year plan for further expansion after the war, which would be of "area coverage" in order to insure service to thinly settled as well as thickly settled districts. Such area action was shortly thereafter made possible by the Department of Agriculture Organic Act of 1944 (the Pace Act) which liberalized the terms under which REA loans can be made.

Pointing out that there are now fewer telephones in rural areas than there were 20 years ago, the report above noted suggested a possible tying-in of power lines with telephone systems, in order to extend the telephone service. A bill (H. R. 1665), introduced in Congress early in 1945, provided for the authorization of such extension of REA jurisdiction. Another Congressional approach to the rural telephone situation was made in two bills (S. 2213 and H. R. 1278) which would create a telephone authority similar to the Rural Electrification Administration.

Acquisition by REA cooperatives of privately owned plants—for both generation and for distribution of electricity—was reported in numerous instances in various parts of the country.

COOPERATIVES IN SPECIAL GROUPS

In the conventions of two campus cooperative federations—Midwest and Central—which were held in the spring of 1944, post-war development of student cooperatives was stressed; the latter meeting voted to investigate the possibilities of a foundation to finance students' cooperative housing. One speaker stated that, of 24 State universities approached regarding such housing, 10 were planning to build dormitories after the war, 4 were willing to establish university-owned cooperatives, and 5 were willing to subsidize cooperatives run by the students themselves.

At the University of Minnesota steps were taken to organize a council of student cooperatives.[2]

Considerable expansion of cooperative activity among Negroes occurred in 1944. The opening of two new branches by a grocery association in California has already been mentioned, and one of the branches opened by the Washington, D. C., association was to serve the residents in a Negro housing project, in which a buying club had been in operation for some time. In Chicago two new associations were started, one a buying club sponsored by the Brotherhood of Sleeping Car Porters and the other a store to serve the residents of a large interracial housing project. The latter has also sponsored the formation of a credit union and is planning a cafeteria for serving noonday lunches. A housing development in Michigan developed first a buying club, then a store. In Florida a grocery association that has been in operation for several years opened a new department for drugs and sundries. Steel workers led in the organization of an association admitting both Negroes and whites in Gary, Ind.; the

[1] Rural Electrification After the War: A preliminary report (Rural Electrification Administration, St. Louis, Mo., September (?) 1944.

[2] At the time the Bureau's study of student cooperatives was made, in 1941, such councils already existed at the universities of Chicago, Michigan, Missouri, Texas, and Wisconsin.

association has purchased land and at the end of the year was campaigning for funds to finance a store building.

Much cooperative activity has also occurred among the residents of white housing projects, and both buying clubs and stores were reported to be under way or already in operation. Another interesting wartime development is the reported revival of apartment-house tenants' interest in the so-called "cooperative apartments" so common a decade and a half ago.

Greater interest and participation in cooperatives was evidenced by labor unionists and their organizations. As noted elsewhere, numerous labor organizations endorsed the cooperative movement and urged its extension by and among their members. Individual unionists (including a number of high-ranking officials of international unions) have been active in cooperative affairs. Among the associations formed in 1944 were several either sponsored by organized labor or in which unionists were prominent.

Developments Among the Federations

COMMERCIAL ORGANIZATIONS

Expansion of national or joint enterprises.—Two additional regional wholesales were admitted into membership in National Cooperatives, Inc. These were the Utah Cooperative Association and the Manitoba (Canada) Cooperative Wholesale, Ltd. The membership of the national organization had previously consisted of 14 regional wholesales in the United States and 2 in Canada. National Cooperatives, which made its first ventures into production in 1943 with the purchase of a chemical-products plant and a milking-machine factory, in 1944 expanded the first enterprise by the addition of seven new products and the latter by beginning the manufacture of electric water heaters for household use.

A shingle mill and timber tract acquired by National Cooperatives in February was later incorporated as a separate, subsidiary organization, the International Lumbering Association. Late in the year it purchased a tract of timber containing about 100 million feet of lumber, largely cedar.

Four regional wholesales (Midland, Indiana Farm Bureau Cooperative Association, Illinois Farm Supply Co., and Wisconsin Cooperative Farm Supply Co.) cooperated in the formation of Cooperative Plant Foods, Inc., which will operate a $500,000 fertilizer acidulating plant erected by them. The plant, expected to go into operation about December 1, 1944, will produce superphosphate, an essential ingredient of all mixed fertilizer.

Expansion by individual regional and district wholesales.—Numerous productive facilities also came into the ownership or control of individual wholesales. Among the new acquisitions were the purchase of a fourth interest in a Kentucky coal mine by Indiana Farm Bureau Cooperative Association; an oil-compounding plant by Cooperative Services (Waterloo, Iowa); soybean-processing plants by Farmers Union Central Exchange, Consumers Cooperative Association, and Ohio and Pennsylvania Farm Bureau Cooperative Associations, respectively; a fertilizer plant by the Ohio association; and an alfalfa-dehydrating plant by Consumers Cooperative Association, which also

established a geological and exploration division with 5 full-time geologists. This last-named association suffered a disastrous explosion at one of its refineries, in which 14 employees lost their lives, and also lost its largest lumber mill by fire, during the year.

Indiana Farm Bureau Cooperative Association in July voted the construction of a new "cracking" plant, with a capacity of 2,500 barrels per day, to be erected as soon as approval could be obtained from WPB. Ohio Farm Bureau Cooperative Association late in the year announced that it had obtained priorities for the erection of a grain terminal elevator. Range Cooperative Federation, service organization for northern Minnesota cooperatives, authorized the construction of a slaughterhouse. National Cooperatives was asked by its grocery committee to study the possibilities of acquiring flour mills with capacity sufficient to supply the entire needs of the cooperative movement.

Midland Cooperative Wholesale created much interest both within and without the movement when it bought a feed mill in Wisconsin and with it an entire village.

New office or warehouse buildings or both were purchased or erected by Cooperative Service Co. (Waterloo, Iowa), Consumers Cooperative Association (this association also started construction on another warehouse), Ohio Farm Bureau Cooperative Association, Midland Cooperative Wholesale, Farmers Union Central Exchange, Consumers Cooperatives Associated, and Southern States Cooperative. The manager of the Oregon Grange Wholesale noted in his annual report that additional warehouse space would be needed, as a result of increased business.

Among new services started by Consumers Cooperative Association were the addition of flour and household drugs in its grocery department, a new legal division, and a new management division to operate the C.C.A. retail department, as well as the stations and stores under management contract with C.C.A. Southern States Cooperative adopted a plan whereby it will "finance, establish, operate, supervise, and keep accounting records" for frozen-food locker plants in communities served by the wholesale.

In Wisconsin, the annual meeting of the A & B Co-op Oil Association (Ashland, Wis.) authorized several new services as soon as arrangements could be made. These included warehousing and the distribution of farm machinery, roofing and building material. The Northern Wisconsin Cooperative Park Association voted to sell its properties to Cooperative Services, at Maple, Wis. The park had been closed for nearly a year because of wartime restrictions on travel. Cooperative Services authorized construction of a cold-storage locker plant, and approved plans for a processing plant. Central Cooperative Wholesale took over the trucking service of the Range Cooperative Federation and the handling of fresh produce (after the dissolution of Cooperative Terminal in April 1944). The annual meeting also directed the continuance of a full-time worker with junior cooperators and youth leagues, and appropriated $18,000 for radio broadcasts. In October, Midland Cooperative Wholesale announced the appointment of two full-time workers to deal with relations with church groups and with labor groups, respectively; a third worker to deal with business groups was to be appointed later.

Several of the regional wholesales carried on intensive drives for additional capital to finance ventures planned or under way.

In California, Associated Cooperatives of Northern California dropped "Northern" from its name and became the cooperative wholesaling organization for the whole State. An ambitious program of expansion was adopted.

The establishment of two new wholesales was reported. Southwest Cooperative Wholesale, at Phoenix, will serve cooperatives in Arizona and adjoining States, and will handle household and farm supplies, building materials, work clothing, women's ready-to-wear garments, petroleum products, tires, and other items. Four Maryland cooperatives established Federated Cooperatives of Maryland, to act as their joint purchasing agent and provide auditing and other services.

EDUCATIONAL AND SERVICE FEDERATIONS

In California, Southern California Cooperators, a regional service organization, in its annual meeting authorized a program for the ensuing year including publicity, furnishing of speakers, managers, and auditing service, and the development of a regional health program. At the opposite side of the country, the Potomac Cooperative Federation was formed by associations from the District of Columbia, Maryland, and Virginia, to coordinate the activities and experience of the associations in the area, further their educational and business activities, work for the establishment of a branch wholesale warehouse by Eastern Cooperative Wholesale, and eventually undertake such services as auditing for member associations.

In Illinois, associations of the Waukegan-North Chicago area formed an educational federation, the Lake County Co-op Council, with a full-time educational director. The Chicago cooperatives also organized the Chicago Cooperative Finance Association, capitalized at $100,000, to assist in the financing of new cooperative projects.

Eastern Cooperative League, with headquarters in New York City, at its annual meeting authorized a 5-year plan of development and the raising of a fund to be used in the furthering of the cooperative movement in the various areas served by the league.

In the Philadelphia area, the 16 associations affiliated with the Philadelphia Area Cooperative Federation are financing an ambitious educational and merchandising program with a full-time "superviser" who goes from store to store, assisting them in their problems of operation. The funds for the work come from dues of 0.2 percent of sales paid by all 16 associations, dues of 0.5 percent paid by 13 of the associations which desire field service, and voluntary contributions in the form of regular dues paid by individual cooperators.

The Texas Federation of Cooperatives in its annual meeting voted for a strong educational campaign to present the cooperative point of view to the public, to work for fair legislation and to oppose legislation discriminating against cooperatives, and to "take the lead in solving cooperatives' auditing problems."

Representative of 11 cooperative associations of various types toward the end of 1944 organized the Central Wisconsin Cooperative, "to promote and encourage joint cooperative projects in the area." In the same State cooperative funeral associations formed the Wisconsin Federation of Funeral Co-operatives,[3] for "educational,

[3] Similar federations exist in Iowa and Minnesota.

organizational, and legislative" purposes, and possibly later the manufacture of caskets and other funeral supplies. Earlier in the year representatives from burial cooperatives of five States (Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin) had met, with the purpose of forming a national association. The functions of the association were outlined as those of coordinating activities "with regard to National and State legislation, personnel selection, and exchange of information on management, prices, advertising, and purchasing of equipment."

Intercooperative Relationships

In Indiana, where certain urban cooperative associations have for some time been obtaining coal for their members from the Farm Bureau cooperatives, a conference of farmer and city consumers was called late in 1944, to work out further relationships.

Resolutions calling for elimination of competition and duplication of effort by the Central Cooperative Wholesale, Midland Cooperative Wholesale, and Farmers Union Central Exchange were passed in conventions of the three wholesales. These three organizations, originally handling different commodities and serving different areas, have expanded their territories and services so that there is at present a good deal of overlapping. In numerous cases two or more of these wholesales have already taken joint action for a common end. The above resolutions are an additional step toward what may eventually work out to be a merger of two or of all three, in the interests of economy and efficiency.

In several areas moves for coordination of activities of associations and exchange of experience were taken. In Canton, S. Dak., a picnic was held, bringing together the members of the various local cooperatives—store, petroleum association, electricity association, telephone association, grain elevator, creamery, insurance association, and lumber yard.

The 1944 convention of C.C.A. adopted a resolution calling for closer coordination between consumer purchasing cooperatives and producer marketing cooperatives "to the end that goods may be moved directly from producer groups to and through consumer cooperatives, without waste or lost motion, and with a view to raising the levels of nutrition and standards of living and health for all people."

By an arrangement made between the two wholesales, Consumers Cooperative Association (Missouri) received from Farmers Union State Exchange (Nebraska) 200,000 gallons of gasoline in exchange for the same amount of burner oil. C. C. A. also supplies other regionals with grease, paint, and canned goods.

From the Pacific Coast it was reported that several meetings of representatives of Grange Wholesales of Washington, Idaho, Montana, and California, had been held, with a view to joint buying of supplies, and that "considerable progress" had been made.[4]

[4] Additional data on employer-employee relationships, cooperatives and the war, post-war reconstruction, etc., will be included in a forthcoming bulletin.

Women in Industry

Wartime Job Opportunities for Women Household Workers in Washington, D. C.[1]

Summary

ANALYSIS of 562 advertisements for women household workers in Washington, D. C., and nearby Virginia and Maryland, published in the domestic-service columns of a local newspaper, during the period September 16–October 15, 1944, showed an unusually wide range in wages. Monthly wages offered in 86 advertisements ranged from $40 to $160 a month and averaged $92.25. In a group of 323 advertisements offering weekly pay the rates were as low as $12 in some cases and as high as $30 in others, the average for this group being $20, or a median of $20.35.

This latter figure showed a striking improvement as compared to weekly earnings of resident household employees covered in a somewhat comparable survey in 1940.[2] That study showed earnings ranging from $3.50 to $18.75 a week, the median average for the white women being $9.35, and the Negro women $8.85. As a result of the increase in the cost of living since 1940, the meals offered in 1944 also had a higher value.

The 1944 average wage offered for part-time workers by the week was $13.10, for day household workers it was $4, and for those on an hourly basis, 50 cents.

The findings as to working hours, based on the incomplete data given in the advertisements, indicate a trend toward an 8-hour day.

The advertisements included calls for chambermaids, children's nurses, cleaners, cooks, general houseworkers, housekeepers, laundresses, maids, mothers' helpers, and waitresses. The occupational boundary lines were in many cases not distinct and the demand for specialized workers was restricted. Leading all other desired personal qualifications was "experience."

The race of the desired workers was specified in only 22 percent of the advertisements, and in two-thirds of these cases Negro applicants were designated as preferred or acceptable.

In most instances in which the size of the family was mentioned, the number of members was not large. The adverse psychological effect on possible applicants of a published announcement that there were many persons in the household was probably an influence in omitting references to big families.

[1] Prepared in the Bureau's Editorial and Research Division by Mary T. Waggaman.
[2] Bureau of Labor Statistics Serial No. R. 1437; Women Domestic Workers in Washington, D. C., 1940.

Statements regarding the size of workplace disclosed some awareness of the employee's viewpoint. Thus, some of the advertisements mentioned that the service was to be performed in an apartment, a small house, or a bungalow, and referred to the newness and modern character of the prospective home. In over half of the cases in which the question of living in or living out was mentioned, living in was required, and accommodations were noted in a number of others.

In view of the housing shortage in Washington, the living-in accommodations offered were remarkable. They were described as excellent quarters, comfortable rooms, sunny rooms, warm rooms, lovely rooms, rooms with radios, rooms with showers, rooms and private baths, and rooms that might be shared. Although it would have been desirable to check on these attractive offers, it was not practicable to do so however, the fact that prospective employers paid for the publication of such details indicates a recognition of the necessity of providing suitable living conditions.

Basis and Scope of Study

The present survey was undertaken in order to get at least a partial picture of the effect of the war upon a previously poorly paid and "hated trade," which, however, in 1940 was followed by over one-fifth of the 119,313 women gainfully employed in Washington at that time. If the reported reduction of 20 percent in the number of women who were engaged in private household employment for the country as a whole from March 1940 to March 1944 [3] is applicable to the 23,960 women engaged in similar work in Washington, D. C., in March 1940, then it may be estimated that in the same 4 years there was an exodus of about 4,800 women from this field of labor in the Nation's Capital.

The 562 job opportunities analyzed in this article were, as noted above, taken from the domestic-service columns of a Washington paper during the period September 16–October 15, 1944. Only job offers providing specific wages were selected, and an effort was made to exclude clubs and boarding houses. Duplicates were eliminated by a comparison of the published telephone numbers. Some of the notices ran for several consecutive days, and some reappeared again after an interval in which the employer either failed to secure the desired help or found the accepted applicants unsatisfactory. In some cases the advertisement was recast, possibly with a view to enhancing its drawing power. These repeated calls for help were in themselves an evidence of the tightness of the local domestic labor market.

Occupations for Which Workers Were Wanted

Among the workers called for in the advertisements analyzed in this article were chambermaids, children's nurses, cleaners, cooks, general houseworkers, housekeepers, laundresses, maids, mothers' helpers, and waitresses. However, opportunities for specialized workers were comparatively few. Considerable variety was indicated in the combination of duties to be performed. Of 387 advertisements for cooks or general houseworkers, or a combination of both, only 18 cooks were wanted for whom no other responsibilities were specified. Of the remaining 369 in this group of advertisements, 26 called for child

[3] Monthly Labor Review, November 1944 (p. 1030): Changes in Women's Employment During the War.

care, one position requiring housekeeping, plain cooking, light laundry, and assistance with 3 children.

In 18 of 46 requests for children's nurses there were no other duties stipulated. The remaining 28 were expected to do "light housework," maintain general care of an apartment, or perform other tasks.

Only those advertisements for housekeepers that were published under "domestic service" are covered in this report. Possibly the more highly skilled housekeepers were advertised for in other help-wanted columns. The majority of the 35 openings for housekeepers included in this survey indicated that such employees would be expected to cook, clean, or take care of a child or children.

Of the 43 advertisements for "maids," the most specialized call was for a "parlor maid," with no other duties specified. Half of the 10 advertisements for chambermaids referred to other work to be done, one of these calling for the care of a small boy. Of the 5 "waitress" jobs, only 2 had no other duties listed by the prospective employer.

Among the remaining job opportunities were those for house-workers, mothers' helpers, and "women" for different kinds of domestic employment—one being to watch children.

Six advertisements offered the job of laundress without specifying other activities, and were for part-time workers on an hourly or daily pay basis.

The occupational distribution of the employees sought in the advertisements suggests that objections made to household employment on the ground of lack of standardization in work skills and duties are not without validity.

Qualifications Specified

Race.—Only 122 advertisements (21.7 percent) referred to the race of the desired household workers. Of the latter, 40 requests (32.8 percent) specified white, 55 (45.1 percent) Negro, 26 (21.3 percent) white or Negro, and 1 a preference for a white worker. In this connection it is of interest to recall that in the 1940 study, already referred to, 514 of the 586 women household employees covered (87.7 percent) were Negroes.

Experience.—One of the qualifications for women household workers which recurred most often in the advertisements analyzed was "experience." This requisite was mentioned either alone or in combination with one or more others 84 times. Some advertisements stressed the desirability of "a fondness for children." Dependability was considered important enough to be included in various work appeals. Other qualifications less frequently called for were intelligence, capability, competence, efficiency, training, cleanliness, neatness, good health, and a nice disposition.

Age.—Openings for both the young and those no longer young were available, one or more prospective employers expressing a preference for the "mature," the "middle-aged," the "settled," "an older person," a person "between 30 and 50," or "not over 60." On the other hand, certain advertisers specified "school girls."

References.—Of 562 advertisements, 195 asked for references. Only a small minority of the advertisers gave their home addresses, most of them apparently expecting applicants to follow up job offers by calling the telephone numbers given. The fact that the word "references" was paid for in as many as 195 instances when references could easily

be requested in the preliminary telephone interview would seem to indicate an effort to eliminate in advance applicants who could not furnish such credentials.

Health card.—Only 25 advertisements requested a card certifying good health. Payment for the specifying of this preliminary requirement might also be interpreted as a weeding-out procedure.

Regularity of Employment Offered

Of the 562 advertisements here analyzed, 409 were for full-time regular workers—86 to be paid by the month and 323 by the week. The remaining 153 were for part-time workers employed by the week or on a daily or hourly basis, as noted in the accompanying tabulation.

	Job opportunities	
	Number	Percent
All job opportunities	562	100.0
Full-time employment	409	72.8
Payment by month	86	15.3
Payment by week	323	57.5
Part-time employment	153	27.2
Payment by week	101	18.0
Payment by day	[1] 24	4.3
Payment by hour	28	4.9

[1] One job for half a day's work.

Wages Offered

For full-time monthly workers the wages ranged from $40 to $160. Slightly over 59 percent of the openings were for $100 or more, 7.0 percent were from $110 to $115, and 5.8 percent were from $125 to $160, as shown in table 1. The average of these offers was $92.25.

Included in the 11 job opportunities with wages over $100 per month were 5 for cooks and 1 for a housekeeper-cook at $110 each. Other openings in this group included 1 for a cook and general housekeeper who was expected also to do light laundry; 1 for a child's nurse and 1 for a cook to assist with children, at $125 each; and one each for a cook at $130, a nurse-governess at $150, and a practical nurse experienced with children at $160.

Full-time weekly workers were offered rates ranging from as low as $12 to as high as $30 in 3 cases each. The average wage offered for this group was $20.[4]

In 52 advertisements carfare or a pass was to be provided. Allowing for days off in which no carfare would be paid, or reducing the value of the pass to the worker by the use made of it by the employer, this extra compensation might be estimated at $1.00 per week, which would add about 16 cents a week to the average for the entire 323 available jobs and bring it up to $20.16.

Part-time workers.—For part-time weekly workers the weekly wages ran from $5 to $18 and averaged $13.10. Over 50 percent of the advertisements for such workers offered less than $15 a week, while only 1 percent of the 323 advertisements for full-time weekly work was for less than that amount. None of the advertisements for part-time workers offered a rate exceeding $18 per week, as compared with 82.6 percent of the offers of $18 or more for full-time weekly workers.

[4] The words "to start" were added in 1 advertisement offering $17 per week, in 7 offering $18 and in 1 at $20 per week.

TABLE 1.—*Wages and Carfare Offered to Household Employees, Washington, D. C., September 16–October 15, 1944*

Rate of wages	Jobs offered		Provision for carfare	
	Number	Percent	Number	Percent
Full-time employees				
Wages per month	86	100.0	----	----
$40.00–$45.00	2	2.3	----	----
$50.00–$55.00	3	3.5	----	----
$60.00–$65.00	6	7.0	----	----
$70.00–$75.00	7	8.1	----	----
$80.00–$85.00	11	12.8	----	----
$90.00–$95.00	6	7.0	----	----
$100.00	40	46.5	----	----
$110.00–$115.00	6	7.0	----	----
$125.00–$130.00	3	3.5	----	----
$150.00–$160.00	2	2.3	----	----
Wages per week	323	100.0	52	100.0
$12.00	3	1.0	16	30.8
$15.00	37	11.5	3	5.8
$15.50–$17.50	16	4.9	18	34.6
$18.00–$19.50	54	16.7	13	25.0
$20.00	124	38.4	----	----
$21.00–$21.50	5	1.5	2	3.8
$22.00–$22.50	[1] 31	9.6	----	----
$23.00–$24.00	2	.6	----	----
$25.00	[2] 44	13.6	----	----
$26.25–$30.00	7	2.2	----	----
Part-time employees				
Wages per week	101	100.0	41	100.0
$5.00–$9.00	7	6.9	4	9.8
$10.00	22	21.8	10	24.3
$11.00–$14.00	23	22.8	8	19.5
$15.00	36	35.6	17	41.5
$16.00–$17.00	5	5.0	----	----
$18.00	8	7.9	2	4.9
Wages per day	24	[3]	21	----
$3.00 (½-day)	1	[3]	----	----
$3.50	4	[3]	4	[3]
$4.00	14	[3]	14	[3]
$4.20	2	[3]	----	----
$4.50	3	[3]	3	[3]
Wages per hour	28	[3]	19	[3]
$0.40	1	[3]	----	----
$0.50	21	[3]	17	[3]
$0.55	1	[3]	----	----
$0.60	2	[3]	1	[3]
$0.65	3	[3]	1	[3]

[1] Bonus offered in 1 advertisement.
[2] 1 advertisement offered a bond of $150 after 6 months or a trip to California.
[3] Number too small to justify computation of percentage.

In 57 advertisements for part-time weekly workers in which both the hours per day and the days per week were specified, there were many variations not only as to the hours of arrival and departure (the time of arrival being as early as 7 a. m. and as late as 7 p. m.), but also in the number of hours per day and the number of days per week. The daily hours ranged from 2 to 7, the days per week from 3 to 6, and the weekly hours from 14 to 44. In most cases, however, time for one or more meals was apparently included in the work period. When Sunday was designated as free and no other day off mentioned, a 6-day week was assumed.

Ordinarily part-time employees do not have as many meals at one workplace as do full-time employees, although by dovetailing part-time jobs it might be possible to combine them into a daily pattern. Furthermore, the proportion of time spent in coming and

going to each part-time job increases with the reduction in the hours worked per day. When an employee can secure part-time jobs among different households in the same apartment or the same neighborhood, this particular disadvantage may be obviated. Such an arrangement, however, requires not only available jobs but also considerable organizing ability.

Work by the day was also offered in 24 cases. These included 1 at $3 for half a day and the remaining 23 at from $3.50 to $4.50 a day, distributed as follows: 4 at $3.50, 14 at $4.00, 2 at $4.20, and 3 at $4.50. Carfare was also offered in all but three cases.

The number of hours per day was mentioned in only seven cases; four of these called for 8 hours, one for 7½ hours, and two for 7 hours. The days required per week were from 1 to 3. Cleaning and laundry work predominated among the jobs open to day workers.

There were also 28 advertisements for part-time workers by the hour. The pay ran from 40 to 65 cents; three-fourths of these paid 50 cents, and carfare was offered in nearly all cases.

Daily and Weekly Hours of Full-Time Workers

Daily hours.—Of the 86 advertisements for regular household employees to be paid by the month, only 7 referred to daily hours of work except in connection with days or time off. Of these 7 openings, 2 provided for a 10½-hour day, 1 for an 8-hour day, and 1 for a work period from 10 a. m. "through dinner." In the 3 remaining cases the term "short hours" was used.

Of 323 advertisements for full-time weekly workers, 34 stated the hours of work,[5] and 28 of these also specified the days off per week. In 14 instances the working day was to be 8 hours; 3 of these had a 5-day week and 4 a 5½-day week. In one other advertisement the working time was 8 hours during 5 days, offset by a 12-hour day or Saturday, with only alternate Sundays free. These and other combinations of daily hours and days off are listed below.

	Hours per day [1]	*Days (or time) off per week*
1 advertisement	7½	1½ days.
3 advertisements	8	2 days.
4 advertisements	8	1½ days.
1 advertisement	8	Part of Saturday afternoon; all day Sunday.
4 advertisements	8	Sunday.
1 advertisement	8	½ day Thursday; alternate Sunday.
1 advertisement	[2] 8	Alternate Sunday.
1 advertisement	8	([3]).
1 advertisement	8½	1 day.
2 advertisements	8½	([3]).
1 advertisement	9	Saturday afternoon; all day Sunday.
1 advertisement	9	3 hours Saturday afternoon; all day Sunday.
4 advertisements	9	1½ days.
1 advertisement	9	Sunday and evenings.
1 advertisement	9	Sunday.
1 advertisement	9½	1 day.
2 advertisements	9½	([3]).
2 advertisements	10	1 day.
1 advertisement	10¼	Sunday.
1 advertisement	10½	([3]).

[1] In most cases mealtime was apparently included in the working hours.
[2] For 5 days; 12 for 1 day.
[3] Not given.

[5] In most cases mealtime was apparently included in the work period.

Thirteen additional advertisements for this group of workers referred to hours per day in the following terms:

	Duration of work
1 advertisement	8 a. m. through 7:15 dinner.
1 advertisement	8:30 a. m. through dinner.
1 advertisement	9 a. m. until after dinner.
1 advertisement	10 a. m. through dinner.
1 advertisement	1 p. m. through dinner; all day Saturday.
3 advertisements	Full time.
2 advertisements	Short hours.
1 advertisement	Easy hours.
2 advertisements	Good hours.

Workweek of full-time workers.—Information on the duration of the workweek contained in 185 advertisements is given in the accompanying tabulation.

	Advertisements	
	Number	*Percent*
All advertisements specifying time off per week	185	100. 0
2 days	[1] 23	12. 4
1½ days	[2] 69	37. 3
1 day a week and alternate Sunday	14	7. 6
Sunday	[3] 71	38. 4
Other arrangements	8	4. 3
Sunday afternoon and ½ weekday	1	. 5
Wednesday afternoon and alternate Sunday after 10:30 a. m	1	. 5
Thursday and Sunday from 11 a. m	1	. 5
Thursday morning and Sunday afternoon	1	. 5
½ weekday and alternate Sunday	2	1. 1
Alternate Sunday	1	. 5
Evenings	1	. 5

[1] 1 advertisement stipulated the employee was not to leave until after breakfast on Sunday.
[2] 1 advertisement offered 1 extra day a month.
[3] 3 advertisements offered free evenings or nights; 1, most evenings after 7:30; 1, holidays; 1, 2 mornings; and 1, part of Saturday afternoon. Also includes 3 part-time workers.

Special Working Conditions

The workplace.—The size of the workplace is, of course, a significant factor in domestic service. Twenty-six advertisements specified that the work was to be done in an apartment, an additional 36 noted that the place of employment was a small apartment, and 28 others referred to small homes, houses, or bungalows.

The newness or modern character of the apartment, house, or home was pointed out by some advertisers as an attraction, as was also the employment of "other help." Convenient transportation was referred to again and again, and one advertiser promised free transportation on days off. Among the inducements cited at least once or twice were permanancy of the job, regular increases in salary, the supplying of uniforms, "considerate family," a $150 bond or a trip to California after 6 months' service, and transfer of the employment to Palm Beach in the near future.

Composition of family.—The question of the number of persons to be served by the household employee is obviously of high importance to the applicant. Of over 200 advertisements giving some data on the composition of the families involved, many were too incomplete to allow of satisfactory statistical presentation. The following 87

show that in most of the job opportunities for which definite data are available the families were not large.

	Advertisements
All advertisements	87
Family of 1	4
Family of 2	31
Family of 3	30
Family of 4	19
Family of 5	3

In addition to the above figures, 19 advertisements reported "small families"; 4, "small adult families"; 26, that there were 3 adults each in the family; and 10, one adult each. Another advertiser had the courage to announce a family membership of 5 adults. Although no children may have been in these families of 1, 3, and 5 adults, it was thought best to exclude these advertisers from the above tabulation giving exact figures.

From such statements as a "4-year old child in family," "family with children and nurse," "2 children in the family," "3 children in the family," it may be estimated that over 50 other advertisers had 2, 3, or more members in their families, including at least 5 advertisers with 4 or more members.

It is quite probable, however, that advertisers with large families considered it inadvisable to report on their size.

Living-in accommodations.—Of 409 advertisements for full-time workers, 221 included some reference to living in or living out, as follows:

	Number of advertisements
All advertisements with residence provisions	221
"Live in"; "must live in" [1]	136
Accommodations offered without use of term "live in"	34
"Preferably live in"	4
"Live in or out"	35
"Live out"	12

[1] The expression "must live in" was used in 5 offers.

From the worker's point of view, "living in" has disadvantages, among them the possibility of being continually "on call" and the sense of servitude and separation resulting from off-duty residence with employers instead of with family or friends. Furthermore, many household workers are married and have their own home duties. An advantage, on the other hand, may be the time saved in going to and from work and the avoidance of the wear and tear of such trips in bad weather.

In view of the existing housing shortage in Washington, the accommodations offered (table 2) to domestic employees in the homes of the advertisers were rather remarkable.

TABLE 2.—*Quarters Offered to Household Employees, Washington, D. C., in Advertisements, September 16–October 15, 1944*

Description of quarters or room	Number of advertisements		Description of quarters or room	Number of advertisements	
	Quarters or rooms	Baths		Quarters or rooms	Baths
Total	79	47	Room—Continued.		
Living quarters:			Own	4	4
Comfortable	1	-------	Own with radio	1	-------
Excellent	1	-------	Pleasant	1	-------
Excellent, private	1	-------	Pleasant, with bath	1	1
Room:			Private	2	-------
Attractive	1	1	Private, with bath	11	11
First floor	1	1	Private, husband boarded free	1	1
Furnished	1	1	Private, with shower	1	(3)
In beautiful suburban home	1	-------	Sunny	1	-------
In first-class home	1	-------	Sunny, warm basement, with two beds and cook stove	1	[1] 1
In lovely home	1	-------	Unusually fine, with shower	1	(3)
In new country home	1	-------	Upstairs	7	-------
Large	1	[1] 1	Upstairs, comfortable	1	-------
Large, comfortable	1	-------	Upstairs, could be shared with sister or friend	1	-------
Large, private, in fine home	1	-------	Upstairs, lovely with radio	1	-------
Lovely	3	2	Upstairs, pleasant	1	1
Lovely, with radio	1	1	Upstairs, private	3	2
Lovely, with radio and all conveniences	1	1	Upstairs, with bath	5	5
Nice	2	1	Warm basement	1	[1] 1
Nice, on country estate	1	-------	Which could be shared with employed husband	1	-------
Nice, upstairs	1	[1] 1	Which could be shared with husband who would do odd jobs for board	1	1
Nice, very	1	1	With bath	7	[2] 7
Nice, with radio	1	-------			
Nice (would take mother and child 3 to 6 years of age)	1	1			

[1] Private.
[2] One designated private.
[3] Shower.

Domestic Workers' Union

Organized household employees of Washington, D. C. are basing their hope of retaining, in peacetime, the decided wartime gains made in wages and employment conditions, on the efforts of the United Domestic Workers Local Industrial Union No. 1348. This organization was established in 1942 and received its charter of affiliation with the C.I.O. in November 1943.

The standards of the union, [4] revised in December 1944, provide for time and a half for overtime, require that workers be reimbursed for travel outside the city limits, and recommend that no worker accept a job of less than 8 hours' duration. Union wage-and-hour standards are as follows:

	Minimum wages	*Maximum hours*
Full-time workers:		
Inexperienced	$18–$20 a week	48
Experienced	$25–$30 a week	48
Day workers	60 cents an hour	--
Part-time workers (over 16 hours a week on any one job)	55 cents an hour	--

[4] Information from the secretary of the union.

The employment secretary of the union classifies the worker in accordance with the latter's qualifications, experience, and general ability. In case an employer complains, a standards committee, consisting of five union members, reviews the facts submitted by employer and employee and makes a decision.

A local committee on health has been organized, with a membership of 10 women physicians and 1 union member. An employer who requires that an employee have a health card must furnish a letter from the employer's family doctor stating that the family is likewise taking necessary measures "to insure good health conditions in the home."

A bargaining committee, composed of four union members, aids new members to formulate standards for the jobs they hold. If the employee is not able to negotiate alone, this committee endeavors to negotiate for her. If the committee also fails, the worker is advised to give notice and look for work with an employer who accepts union standards.

The union is interracial. A statement of September 1944 gave the membership as 200, of whom the majority were Negroes.

The organization's employment office is conducted by a paid member of the union, who is on duty 24 hours a week. The employment service is available free of charge to both employers and employees. Union members are counseled to try to secure the approved standards on the job they hold, but if they do not succeed in this the employment office refers them to a union job after they have given 1 week's notice in the position they have found unsatisfactory.

Three main problems face the organization: (1) Making itself known to Washington workers; (2) difficulty in collecting monthly dues from members who do not attend meetings; and (3) raising sufficient funds to cover the expense of a part-time secretary and of the employment office.

This Washington union is the second C.I.O. organization of domestic workers in the United States. The first was chartered in Baltimore in September 1942.[7] Another C.I.O. affiliate for household employees has been recently organized in Louisville, Ky.[8]

[7] Manuscript copy of Program of the Domestic Workers Union (L. I. Union No. 1283, C. I. O., [Baltimore, Md.]).

[8] Information furnished by the secretary of Local No. 1348.

Housing

Development of Canadian Housing Legislation [1]

CANADA'S National Housing Act of 1944 received royal assent on August 15, greatly increasing Federal provision for housing. The program is designed to ease the acute housing shortage by promoting construction, repair, and modernization of houses; to encourage individual ownership of homes; and to provide employment in the post-war period. The principle of Government assistance in construction for home ownership and in low-cost rental housing was embodied in previous enactments but is broadened and extended in the 1944 act. Innovations are the provisions for slum clearance, housing research, and establishment of low-cost projects by life-insurance companies. The act is regarded as essentially a post-war measure, although earlier action may be taken in so far as limitations on labor and material and existing controls (which are to be maintained) will permit. Each part of the act is to come into force by proclamation. All parts were made effective by January 18, 1945, with the exception of Part IV, dealing with repair and modernization of homes.

The growth in Dominion provision for housing from 1935 through 1944 is discussed below.

Pre-War Housing Legislation

The first housing legislation by the Canadian Government was the Dominion Housing Act of 1935, which provided funds for a Government share in loans to builders for the construction of new dwellings. Three-fifths of such a loan was to be provided by a lending institution, one-fifth by the Government, and the remaining fifth was the equity furnished by the borrower.[2] The Home Improvement Loans Guarantee Act of 1937 authorized loans for home improvement and modernization and provided a Government guaranty for a certain proportion of each such loan. This act was used to help in the rehabilitation of private dwellings and the conversion of old houses into small apartments, but was discontinued in October 1940, as a war measure.

Only a limited volume of housing was erected under the terms of the 1935 housing act, which was repealed and superseded by the National Housing Act of 1938. The loan procedure established under the 1935 legislation was continued with some modifications and was extended by the provision of guaranties for loans in remote

[1] Data are from Canada, House of Commons Debates (Ottawa) August 5, 9, 10, and 14, 1944, and the National Housing Act, 1944, 8 George VI, Chap. 46, Ottawa, 1944; Labor Gazette (Ottawa), September 1944; Advisory Committee on Reconstruction, Final Report of Subcommittee IV, Housing and Community Planning, Ottawa, March 24, 1944; Monthly Labor Review (Washington), July 1937 and October 1938; and daily press.

[2] For more detailed information, see Monthly Labor Review, July 1937 (p. 128).

areas, which previously had, in fact though not in law, been excluded from the workings of the act. In addition, the new act for the first time provided for loans for "low-rental" projects. Such projects could be undertaken by either a limited-dividend company or a municipal authority.[3] However, the latter provisions required enabling legislation from the Provinces, and only five of the nine Provinces passed such legislation. Even in the Provinces in which this part of the act came into force, progress was slow, and the outbreak of the European war, in 1939, prevented the establishment of those schemes which had been planned. As a result (and because Part II expired in 1940), the act's provisions for the encouragement of low-rental projects never became effective. Thus, although both the 1935 and 1938 acts contributed toward correcting urban housing conditions, neither had much effect in meeting the needs of the lower-wage groups.

Wartime Housing

Wartime needs brought direct participation of the Dominion Government in supplying housing. Wartime Housing Limited, a crown company created for the emergency, had as its purpose the building of houses for workers in those parts of Canada where war industries had created a serious housing shortage and where such housing could not be supplied by private capital. In most instances, war production would have been hampered seriously had not the Crown company supplied additional housing for war workers. Although some permanent houses were constructed, most of the dwelling units built were temporary. In rural areas, and in a few urban centers, arrangements were made almost entirely for the workers of a particular company.

Recommendations of Reconstruction Committee

The Canadian Advisory Committee on Reconstruction in January 1943 appointed a separate subcommittee to study housing and community planning. The subcommittee's report, published in March 1944, was extensive and influenced the 1944 legislative program. Attention was called to three distinct groups to be considered in housing policy: Those who can afford to build their own homes without assistance; those who are able to pay an economic rental (i. e., one which yields a fair return to the investor) or, with appropriate assistance, to finance the ownership of homes; and those who cannot afford to pay the rents prevalent for satisfactory housing and who, therefore, live in slum or overcrowded conditions if public housing projects are not available. In the opinion of the committee, public provision for housing must cover home ownership; home improvement; slum clearance, including replacement of substandard and slum dwellings and elimination of overcrowding; low-rental projects; and rural and farm housing. Special attention should be given to low-rental housing and farm housing, in which, the committee pointed out, Canada has had little or no public experience. On this basis, it was estimated that a minimum post-war housing program would provide for 700,000 units—urban, rural nonfarm, and

[3] For more detailed information, see Monthly Labor Review, October 1938 (p. 797).

farm—in the first 10 post-war years (assuming 1946 to be the first). Such a figure, although taking into account the sum total of each year's annual building needs for the 10-year period, included only half the minimum accumulation of housing requirements existing at the beginning of the period.

To carry out such a program, the committee emphasized the need for a Dominion town-planning agency to be established immediately. Also recommended was the continuance of the principle of Government assistance for housing construction for ownership, but with broadened scope and area of such assistance. That part of the National Housing Act of 1938 which was designed to provide for low-rental projects needed complete revision, according to the committee, with a view to the inauguration of a comprehensive low-rental housing program under local housing authorities. Various other recommendations included special provisions to be made separately for farm housing, cooperative housing, and company-owned housing in industrial areas, and revision and liberalization of the home-improvement plan. Finally, the report suggested the inauguration of discussions with representatives of the building industry to facilitate economy in labor costs, combined with provision for stable employment, as one step toward the reduction of housing costs.

National Housing Act of 1944

The National Housing Act of 1944 embodies a number of the recommendations of the housing subcommittee on reconstruction. The act is divided into six parts: Part I, construction of houses for home ownership; Part II, Government aid in construction of houses for rental purposes and in slum clearance; Part III, encouragement to expansion of rural housing and construction of houses on farms and in small and remote communities; Part IV, Government guaranty of home-improvement and home-extension loans;[4] Part V, research on housing and community planning; and Part VI, general administration. Appropriations are as follows: Part I, $100,000,000; Part II, $50,000,000 for the Government's share in loans for ordinary- and low-rental housing projects and $20,000,000 for acquisition of land for slum clearance. Government commitments under Part III are limited to $5,000,000. Government guaranty of home-improvement and home-extension loans under Part IV may not exceed a maximum total of $100,000,000. Parts V and VI, which are not discussed below, are to be financed from unappropriated funds and money particularly appropriated for the purpose by Parliament.

Part I enables the Minister of Finance to join with approved lending institutions in making loans for the construction of houses for prospective home owners and to finance cooperative housing projects. The joint loan may not be less than 50 percent of the lending value of the property (including both house and land) nor more than 95 percent of the first $2,000 of lending value, plus 85 percent of the amount by which the lending value exceeds $2,000 but does not exceed $4,000, plus 70 percent of the amount of lending value exceeding $4,000. The maximum interest rate is 4½ percent (under the earlier housing acts it was 5 percent). The interest reduction is made possible

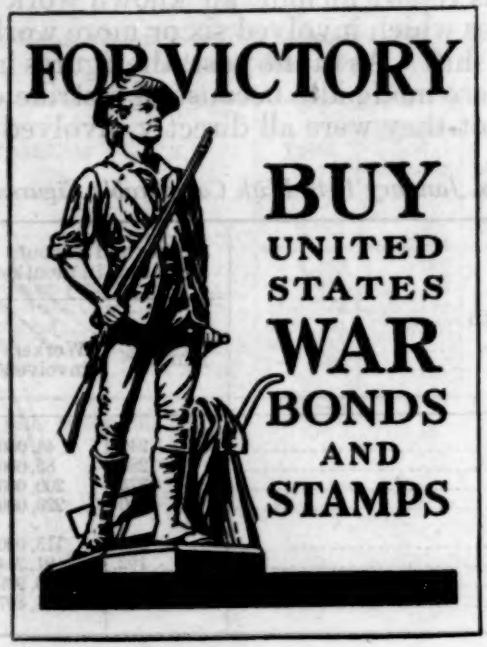
[4] This part is a reenactment of the Home Improvement Loans Guarantee Act of 1937, with some improvements and extensions.

by the fact that the Government is to receive only 3 percent for its share (not over 25 percent) in the joint loan, whereas the lending company receives 5 percent on its share. Maximum duration of such loans is 20 years, but in an area adequately protected by community planning and zoning restrictions, a home owner's loan may be made for 30 years. Certain provisions are made for the sharing of losses.

As regards housing for rental purposes, four types of projects are provided for in Part II: (1) Loans for ordinary or commercial rental housing are made in much the same way as for home ownership, but the maximum loan may not exceed 80 percent of the lending value and the period for loans in areas with special community planning may not exceed 25 years. (2) For low-cost rental housing provided through corporations limiting their dividends to 5 percent and complying with certain other requirements, the Dominion will lend up to 90 percent of the value, provided the need for the project is established, the interest rate is 3 percent, and the contract may not exceed the life of the project or 50 years. In contrast to the 1938 act, no arrangement is made for the undertaking of low-rental projects by municipal authorities. (3) Certain life-insurance companies may be authorized to invest up to 5 percent of their assets in the purchase of land and the construction thereon of a low-cost or moderate-cost rental housing project, on condition that the project is in accordance with an official community plan satisfactory to the Minister of Finance. This was a considerable deviation from previous practice in this field. To give a reasonable degree of security to the investment, which is a new type for Canadian insurance companies, the Government provides a limited guaranty of a net annual return of 2½ percent of the cost of the project for a period not exceeding the estimated useful life of the project, and in no case for more than 50 years. (4) Another innovation in Dominion legislation is the provision for the clearance of slum, blighted, or substandard areas. Authority is given to the Minister, with the approval of the Governor in Council, to make grants to municipalities for acquiring land for this purpose; but, as already stated above, no arrangement is made for the undertaking of low-rental projects by municipal authorities themselves. They are allowed up to 50 percent of any loss incurred in acquiring and clearing land for resale to a limited-dividend company or insurance company for the purpose of building a rental housing project. The remainder of the expense is to be borne by the municipality alone or jointly with its Provincial government.

Joint loans by the Government and approved lending institutions may be made under Part I for new construction of rural as well as urban housing. Consolidation of a new housing loan under the 1944 act with an existing mortgage loan is provided for by Part III. In addition, special assistance may be given approved lending institutions for making loans in rural areas. Payments to the institutions up to $20 may be authorized for each loan granted, together with other reasonable allowances for agents' traveling expenses. The Minister may also make contracts with manufacturers of building equipment "to assure the production of components for rural homes on an economical cost basis." For example, the Government may guarantee or underwrite the sale, at a specified price, of certain equipment or may contract for experimental production of such items.

Under part IV, the Government reimburses a bank or an approved installment credit agency for the amount of loss sustained as a result of a loan for the repair, alteration, modernization, or extension of existing dwellings. To be eligible for the Government guaranty, home-improvement loans must not exceed $2,000 on a single-family unit; for a multiple-family dwelling, the loan may not exceed $2,000 for the first family housing unit and $1,000 for each additional unit. A home-extension loan may not exceed $3,000 for the first family unit to be added to the existing home and $1,000 for each additional unit. Loans of $1,000 per unit are to be repayable in not more than 3 years; for higher loans the maximum period of repayment is 5 years. Interest on such loans is limited to 5 percent. The act provides that the Minister of Finance, with the approval of the Governor in Council, may terminate the operation of this section in respect to either type of loan or any class of such loans.



Industrial Disputes

Strikes and Lockouts in January 1945

THERE were 240 strikes and lockouts in January 1945, involving 44,000 workers, and 228,000 man-days of idleness, according to preliminary estimates of the Bureau of Labor Statistics. Idleness in January was 0.03 percent of the available working time. There were fewer stoppages in January 1945, than in any month during 1944. The number of workers involved was about half the number involved in December 1944 and idleness during strikes and lockouts was less than in any January since 1932. No stoppage in January involved as many as 5,000 workers.

The figures in this report include all known work stoppages owing to industrial disputes which involved six or more workers and lasted as long as a full day or shift. As in the past, the figures include all workers in any plant who were made idle because of a strike or lockout in that plant, whether or not they were all directly involved in the dispute.

Strikes and Lockouts in January 1945 With Comparable Figures for Earlier Periods

Month	Strikes and lockouts beginning in month		Man-days idle in month	
	Number	Workers involved	Number	Percent of available working time
January 1945 [1]	240	44,000	228,000	0.03
December 1944 [1]	280	85,000	380,000	.05
November 1944 [1]	375	200,000	710,000	.10
October 1944 [1]	440	220,000	690,000	.09
January 1944 [2]	330	113,000	710,000	.10
January 1943	192	91,214	452,192	.06
January 1942	156	26,929	330,567	.05
January 1941	240	91,897	663,185	.11

[1] Preliminary estimate.
[2] Revised, but not final.

Activities of U. S. Conciliation Service, December 1944

DURING the month of December 1944, the U. S. Conciliation Service disposed of 2,042 situations, as compared with 2,017 situations in November. During December of the previous year, 2,097 situations were closed.

Of the 208 strikes and lockouts handled, 183 were settled successfully; 25 cases, in which strikes occurred during negotiations, were certified to the National War Labor Board, but in 8 cases a Commissioner of Conciliation had effected a return-to-work agreement prior to certification of the case. The records indicate that 168 situations were threatened strikes and 1,474 were controversies in which the employer, employees, or other interested parties asked for the assignment of a conciliator to assist in the adjustment of disputes. Altogether, 416 disputes were certified during the month to the National War Labor Board and in 2 cases agencies other than the National War Labor Board assumed jurisdiction. The remaining 192 situations included 94 arbitrations, 10 technical services, 20 investigations, and 68 requests for information, consultations and special services.

Cases Closed by U. S. Conciliation Service, December 1944, by Type of Situation and Method of Handling

Method of handling	Total	Strikes and lockouts	Threatened strikes	Controversies	Other situations
All situations	2,042	208	168	1,474	192
Settled by conciliation	1,432	183	144	1,105	----
Certified to National War Labor Board [1]	416	25	24	367	----
Referred to other Federal agencies	2	----	----	2	----
Decisions rendered in arbitration	94	----	----	----	94
Technical services completed	10	----	----	----	10
Investigations, special services	88	----	----	----	88

[1] Of these, 8 were settled prior to referral.

Labor Laws and Decisions

Recent Decisions of Interest to Labor [1]

Enforcement of War Labor Board Decisions in Dispute Cases

SEIZURE of Montgomery Ward & Co. unlawful.—The United States District Court in Illinois, in *United States* v. *Montgomery Ward & Co.*[2] refused to decree that the possession of the plants and facilities of that company by the Secretary of War was lawful, when taken under an Executive order issued by the President of the United States on the stated basis of section 3 of the War Labor Disputes Act (Smith-Connally Act).[3] The company involved was described as one of the largest merchandising firms in the world. It operates 640 department stores, 190 catalog-mail-order offices and 9 mail-order houses, and sells to 30,000,000 customers annually (including farm and rural customers). The Government averred (1) that this firm had a long history of labor disputes which it had refused to settle peaceably through procedures created by the Government, viz., the National Defense Mediation Board and (for 2 years) the National War Labor Board, and (2) that this course of action threatened to interfere with and delay the effective prosecution of the war and had caused repeated strikes.

In reaching its decision, the court considered it as settled law that the War Labor Board orders, which were disregarded by Montgomery Ward, were informative and at most advisory, but no more, and that the Board had no power to enforce them. The War Labor Disputes Act authorizes the President to "take possession of any plant, mine or facility equipped for the manufacture, production or mining of any article or materials which may be required for the war effort or which may be useful in connection therewith" after finding that an interruption of operation thereof would unduly impede the war effort and that the seizure is required to insure its continued operation. The court held this provision of the statute constitutional but considered that the defendant company was not within the quoted terms of the act, in which the court emphasized particularly the word "production." The court considered the defendant an establishment engaged solely in retail selling and distribution and made a dictionary distinction between the terms "production" and "distribution." To be within the seizure powers under the act, said the court, the facility must be not merely necessary to or useful in the war effort but must also be "equipped to produce articles necessary or useful in the war effort."

[1] Prepared in the Office of the Solicitor, Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law nor to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

[2] —— Fed. (2d) ——, Jan. 27, 1945.

[3] U. S. C. 50, app., sec. 1503.

The Smith-Connally Act neither in section 3, nor as a whole, warranted the seizure.

The court conceded that the President's powers as Commander in Chief authorize seizure (within the theater of war) of arms, supplies, food, clothing, transportation facilities, and all implements of war to the extent of the needs of the armed forces, but decided that out of the field of combat the position of Commander in Chief does not warrant the seizure of private property except in case of immediate and impending danger, in which action by Congress (or other civil authorities) would come too late and the circumstances imperatively require the exercise of the extreme of power applied. Since the plants involved are not in the theater of war and the emergency is not immediate, the power of the Commander in Chief did not warrant this seizure and Congress must supply the remedy, if voluntary cooperation will not avoid the difficulty.

Decisions Relating to Fair Labor Standards Act

Piece workers covered by wage and hour law.—Section 6 of the Fair Labor Standards Act, by providing that "every employer" shall pay to "each of his employees," and section 7 by comparable language, indicate affirmatively, as do the definitions of "employ" and "employee," that the term "employee" in this act has unrestricted sweep, apart from limited exceptions specified in section 13. There is in the phrasing and policy of the act and its legislative history no basis for considering the act inapplicable to piece workers. The United States Supreme Court, acting upon the above analysis, in *United States* v. *Rosenwasser* [4] reversed the court below which had dismissed a criminal prosecution against an employer of piece workers because the act was thought not to apply. The Court further discussed the minimum rate "an hour" and the "regular rate" which it had defined [5] to mean "the hourly rate actually paid for the normal nonovertime workweek" as not excluding employees paid by other methods than an hourly rate but merely showing the intention of Congress that the hour be used as a practical and simple measuring rod to test compliance.

State's curtailment of time for employee suit considered by courts.—Oregon enacted a statute of limitations which, with a 90-day safeguard for existing claims, limited recovery of overtime or premium pay, including penalties, "authorized by any statute" to such pay for work performed within 6 months preceding the suit. Another statute had set a 6-year limit for actions on a liability created by statute, other than a penalty or forfeiture. In *Kurth* v. *E. H. Clarke Lumber Co.*,[6] an employee's claim for overtime compensation and liquidated damages under section 16 (b) of the Fair Labor Standards Act was brought after the 90 days and was resisted on the ground that the action was commenced too late. Deciding in favor of the employee, the United States District Court concluded (1) that the 90-day period is unreasonably short and the law unconstitutional in that regard, (2) that the act unreasonably interferes with the normal operation of the Fair Labor Standards Act and hence encroaches on the Federal regulation of interstate commerce, and (3) that the action was timely within the second act referred to above.

[4] 65 Sup. Ct. 295, Jan. 2, 1945.
[5] *Walling* v. *Helmerich & Payne, Inc.*, 323 U. S. 37. (See Monthly Labor Review, January 1945, p. 121.)
[6] — Fed. Supp. —, Dec. 18, 1944.

The Circuit Court of Oregon, on the contrary, dealing with a similar employee action, had previously in *Fullerton* v. *Lamm* [7] refused to concur in the contention that the limitations set by this statute practically nullify the operation of the Federal law. The court considered the 90-day period no undue hardship, and because it could not say "without question" that the statute deprived plaintiff of justice, the court upheld this statute on the presumption of constitutionality of legislative action.

Incentive bonus not part of regular rate.—In an action to enjoin asserted violations of the Fair Labor Standards Act, the Circuit Court of Appeals for the Seventh Circuit in *Walling* v. *Harnishfeger Corp.* (145 Fed. (2d) 589) had to decide what was the "regular rate" at which workers were employed under that act. There was a written contract, fixing base hourly rates and stipulating that for all purposes the "regular rate" is the base rate. Many of the employees were incentive workers and under the contract they might (and over 98 percent of them did) earn, for superior production, from 2 to 29 cents an hour over the base rates. The district court included incentive pay with base pay in deriving the "regular rate" of the statute. The appellate court reversed the court below and decided that the words of the contract prevailed over the actuality in establishing the "regular rate" and that it was proper to pay overtime on the base rate so characterized, ignoring incentive payments. In doing this, the court followed the decision of *Walling* v. *Belo* (316 U. S. 624) as interpreted by it. This authority was understood as having said that an employer and employee may establish the "regular rate" by a bona-fide contract, provided the statutory minimum is respected. The Seventh Circuit disposed of the case of *Walling* v. *Helmerich & Payne, Inc.*,[8] by considering that it merely emphasized the requirement of good faith and had no application to the case under judgment.

Employee unlawfully discharged awarded lost pay in Administrator's action.—In *Walling* v. *O'Grady*[9] the Second Circuit Court of Appeals reversed the United States District Court and decided that it was error to fail to order back pay while granting the other requests of the administrator in an injunction action based on discriminatory discharge under the Fair Labor Standards Act. The court below had required the employer to offer reinstatement in his former position to an employee who had been discharged for bringing a suit to recover overtime pay due under that act and had also enjoined future discrimination against the employee.

The circuit court found that the act made discharge for such cause unlawful and permitted the Administrator to enjoin it. The court said, in substance, the following: Where the Administrator is unable to procure an injunction as soon as the discharge takes place, or to prevent a discharge, the employee should not be deprived of his interim wages on that account. Probably the employee would have a civil remedy, but it would be more practical and a sound reading of the law, if the Administrator could restore the employee to status quo in all regards in the single proceeding brought by him. A right to sue on the part of the employee does not preclude a right in the Administrator, since the latter is asserting the public interest in protect-

[7] —— Pac. (2d) ——, Nov. 18, 1944.
[8] 65 Sup. Ct. 11. (See Monthly Labor Review, January 1945, p. 121.)
[9] —— Fed. (2d) ——, Dec. 29, 1944.

ing employees from retaliation for pressing their claims under the act. Such awards of back pay have been made as an exercise of inherent power of a court of equity. The court remanded the case for allowance of a proper amount of back pay.

Building employees servicing tenants engaged in interstate commerce not under act.—In *Greene* v. *Anchor Mills Co.* (32 S. E. (2d) 341), the Supreme Court of North Carolina decided on December 13, 1944,[10] that building-service employees of the owner of an office building are not engaged in interstate commerce because they serve among other tenants, interstate railroad, telephone and telegraph companies, and insurance companies with interstate transactions. The court interpreted those "engaged in commerce" as those who directly participate in movements or communications within the "channels of commerce." The court considered that the fact that Congress used "engaged in commerce" and "production for commerce" and then gave a special definition for "produce" as including work *necessary* to "production" indicated the intention of Congress not to expand "engaged in commerce" by adding any concept of activity necessary to it, but to leave the line drawn between those actually engaged in commerce and those whose work more remotely affects it.

Share in violating statute no defense to employee action.—The Supreme Court of Georgia in *Butler* v. *Carter*,[11] an employee action under the Fair Labor Standards Act, permitted recovery of unpaid statutory overtime and liquidated damages under the following circumstances: The employee worked 40 hours, apart from Saturday, and also worked on most Saturdays. He testified that his employer told him to show 40 hours only on the company pay roll and to keep a separate record of his work in excess of 40 hours (as would also the employer), promising to settle for the overtime at a later date. The employee testified that he acted accordingly, signing the pay roll regularly with its 40-hour entry. The employer's denials of the agreement, the instructions and the performance of overtime work were disbelieved by the jury, which found for the plaintiff. An appeal to the supreme court was taken from the action of the court of appeals which granted a new trial, on the theory that the employee had disclosed his share in an illegal transaction and the courts would not help him enforce his claim. In reversing this judgment, the supreme court first pointed out that the Wage and Hour Law put the obligation of recording hours worked entirely on the employer, by both its civil and criminal provisions. The court did not consider that there was an unlawful agreement on the employee's part, for the above reason and because the agreement contemplated payment of overtime at a later date. However, the court did not rest its decision upon that basis but raised and answered the fundamental legal question. The court decided that even if there was an agreement or conspiracy between the employer and the employee to violate the provisions of the act, the court must grant the employee recovery of the amount due him for overtime work under the act since the objectives of the act as expressed therein are to eliminate labor conditions detrimental to the health, efficiency, and well-being of the employees and the vital public interest in these purposes must prevail. In this case the public was interested in the

[10] On Jan. 2, 1945, the Supreme Court agreed to review the case of *Borden* v. *Borella*, involving the application of the act to service employees of the office building housing the headquarters of the Borden milk manufacturing enterprise. (See Monthly Labor Review, September 1944, p. 582, for note of decision.)

[11] 32 S. E. (2d) 807, Jan. 6, 1945.

enforcement of the contract as to its provision for the payment for overtime, regardless of any agreement between employer and employee to make false records.

Labor Relations and Industrial Disputes

State court stays out of NLRB problems.—An employer having filed with the National Labor Relations Board a petition for certification of a collective-bargaining agent for his employees (which was ultimately dismissed), had obtained from a State court an order restraining picketing by a union which, he asserted, represented a minority of his employees. The employer further claimed that the picketing was aimed at inducing him to sign a closed-shop contract and that this was an unlawful objective, since to sign a closed-shop contract with a minority group would be to commit an unfair labor practice in violation of the National Labor Relations Act.

The Supreme Court of California reversed the lower court in *Park & Tilford Import Corporation* v. *International Brotherhood.*[12] The appellate court pointed out that picketing for a closed shop is a method by which a union may increase its membership to a majority and thus obtain bargaining rights and through them the closed shop; that the picketing therefore did not necessarily seek an unlawful result. The opinion of the court, however, was based on the following propositions: That it is the exclusive province of the National Labor Relations Board to determine whether a union represents a majority of employees; that only the Board, and not any State court, has authority to determine whether the action of the union in any instance is to induce the employer to commit an unfair labor practice under the National Labor Relations Act; and that peaceful picketing for a closed shop not only may not be enjoined in the Federal courts but, having been held a lawful activity, it is immune from injunction by State courts.

State equity court's jurisdiction to inquire into NLRB consent election upheld.—The highest court in Pennsylvania decided, in an appeal raising the question of jurisdiction only, that a court of that State under its equity jurisdiction may inquire into the propriety of a consent election conducted by officials of the National Labor Relations Board. The suit in question, *Sun Ship Employees Assn. Inc.* v. *Industrial Union of Marine and Shipbuilding Workers* [13] was brought by the losing union in the consent election. The court was asked to void the report of the regional director on the consent election and the election itself, because of irregularities in the election. The court considered that the contract providing for the election was an ordinary private agreement wherein the parties (the contending unions) agreed that the issue of representation should be settled in the way which the agreement prescribed. Under these circumstances, the approval given by the National Labor Relations Board to the consent agreement and the acts of its officials in connection with the election, and even the use of Board forms, do not make the election an official governmental activity. On the contrary, the regional director was acting as a private arbitrator. Upon a claim that an arbitrator functioning under contract has acted in violation of its terms, depriving

[12] —— Pac. (2d) ——, Dec. 30, 1944.
[13] 40 Atl. (2d) 413, Dec. 29, 1944.

a party to the contract of valuable contractual and property rights, a State court of equity has jurisdiction to hear the complaint and grant relief, as warranted, after trial on the merits.

Right of concerted activity for mutual aid guaranteed.—Enforcement of an order to reinstate a discharged employee was granted by the United States Circuit Court of Appeals in *National Labor Relations Board* v. *Schwartz.*[14] Although the record was bare of evidence of discharge for union activity, other evidence showed that the discharge was improper. The employee had been leading a movement to obtain overtime work; this was the employer's reason for discharging her. The Board had considered this evidence relevant, on the ground that discharge for this reason indirectly discouraged labor-union membership. The court, however, referred to the right of the employees under the National Labor Relations Act[15] "to engage in concerted activities for * * * their mutual aid and protection." The court said that interference in that activity was an unfair labor practice under section 158; and pointed out the "rather general misconception" that the act was passed for the primary benefit of labor unions while actually it was passed for the primary benefit of employees. The protection afforded to the exercise by employees of their wishes in reference to becoming union members was intended by Congress "as a grant of rights to the *employees* rather than as a grant of power to the union."

Sidestepping the union in proposing wage increase violates law.—A circuit court of appeals, called upon to enforce a board order in *National Labor Relations Board* v. *May Department Stores*[16] confirmed the Board's decision that the defendant employer committed an unfair labor practice tending to undermine the union, in that the employer, after withholding recognition of the recently certified union, made a unilateral application to the War Labor Board for approval of a wage increase for personnel within this union. The employer had published to the employees the fact of its application and its nonrecognition of the union. The court also affirmed the jurisdiction of the Board over the department store, considering that its activity affected interstate commerce since in one year it purchased 70 percent and sold 12 percent of its merchandise across State lines.

Masters included with licensed deck officers and pilots in bargaining unit.—After an employer refused to bargain with the certified bargaining unit, the National Organization of Masters, Mates and Pilots of America, which the employer claimed to be an improper unit, the National Labor Relations Board ordered collective bargaining. The Fifth Circuit Court of Appeals was asked to refuse the Board's petition to enforce, on the ground that masters are, in law, the representatives of the owners aboard the ship, owing the owners undivided fidelity, and must not unite with mates for bargaining. The court's decision in this case of *Jones & Laughlin Steel Co.* v. *National Labor Relations Board,*[17] was that the Board, not the court, was empowered by Congress[18] to decide upon the appropriate unit for collective bargaining. In such matters, a court may refuse to

[14] —— Fed. (2d) —— (C. C. A. 5), Jan. 20, 1945.
[15] 29 U. S. C. A., sec. 157.
[16] —— Fed. (2d) ——, Dec. 20, 1944.
[17] —— Fed. (2d) ——, Jan. 18, 1945.
[18] 29 U. S. C. A., 159 (b).

enforce bargaining with an unlawfully designated unit, but it may not substitute its judgment for that of the Board on a question of wisdom or convenience. As an exception to the Board's general policy of not including supervisory employees in units with the employees under them, the National Labor Relations Board has recognized ancient traditions existing in some trades, including the maritime custom which always included supervisors, in collective bargaining, with other employees. This practice in maritime cases affected not only seagoing but also inland water vessels, such as the river vessels of the steel corporation. The court decided that the Board must be upheld.

Decisions Under Unemployment-Compensation Laws

Constitutionality of Idaho unemployment-compensation provisions.—A declaratory judgment was requested by an insurance company, to determine the validity of several provisions of the Unemployment Compensation Act of Idaho and to decide whether a constitutional amendment (proposed before and adopted after an unemployment-compensation law vested powers in the Industrial Accident Board) was applicable to the unemployment-compensation law as well as the workmen's compensation law which the board had been administering. The constitutional amendment provided for direct appeals from the board to the State Supreme Court. In *Idaho Mutual Benefit Association* v. *Robinson* (154 Pac. (2d) 156), the amendment was held to apply to appeals in unemployment-compensation matters. It was further decided that the board, which has no personal interest in a case, may, consistent with due process, determine liability for the tax as to an employer, even though board employees have made investigations and even though the board's decisions on matters of fact are made final by statute. On the other hand, a provision that the taking of an appeal from the board's decision constitutes a submission to the jurisdiction of the board is unconstitutional because it deprives the litigant of his right to appeal on the very matter of jurisdiction.

Alteration worker's pay subject to unemployment tax.—A circuit court of appeals in *United States* v. *Vogue, Inc.* (45 Fed. (2d) 609) decided that the compensation of a seamstress who alters dresses in a retail dress shop, without supervision and for a percent of the alteration charge collected by the store, is within the tax base for social-security and unemployment-compensation taxes. The court thought that even at common law the alteration workers would be not independent contractors but employees, though the work is an independent calling and though the workers exercised judgment and were free of detailed direction by the employer, and though each supplied some or all of the tools and materials which she used. The court, however, decided that the field within which the tax is to apply must be marked out by an interpretation of "employee" related to the underlying policy of the law, which is novel; the common-law rules, developed chiefly in relation to liability for wrongful acts, are no sound guide.

Tips properly included as wages under unemployment-tax law.—A statute of Wisconsin provided that contributions should be based on wages, which it defined to include tips. In *Ernst* v. *Industrial*

Commission (16 N. W. (2d) 867), this provision including tips was held constitutional, even though the act contained a clause confining taxes to a base of wages paid by the employer. Further, the fact that the particular employer failed to collect or keep data on the tips given to his waiters neither altered the court's conclusion nor made the commission's calculations of tips, based on averages drawn from the available evidence, either arbitrary or conjectural.

Unemployment not total during strike, when back pay later received.—The Supreme Court of New York heard an appeal from the Unemployment Insurance Board which had directed certain workmen to repay unemployment benefits (*In re Skutnick*, 51 N. Y. Supp. (2d) 711). The history was that of a strike caused by an employer's unfair labor practices, application for and receipt of unemployment benefits under the New York law; and application to the National Labor Relations Board for and subsequent receipt of back pay from the employer for the strike period. The court said that the employees had claimed that the employer's acts justified their refusal to work and warranted their receipt of wages while on strike; that the compensation paid on this theory "bespeaks employment during the period they were thus held to have been justified in refraining from actual performance of work." Therefore, they did not suffer "total unemployment" and were not eligible for insurance.

Decisions Under State Labor Laws

Requirement of labor-union incorporation unconstitutional.—Provisions of the Colorado Labor Peace Act requiring labor unions to incorporate and making unlawful any of the labor-union activities which that act attempted to regulate, except when done after incorporation, were held by the Colorado Supreme Court, in a decision of December 21, 1944, to violate the rights of freedom of speech and assembly guaranteed by the Federal Constitution. In this case, *American Federation of Labor* v. *Reilly*,[19] the requirement of incorporation was said to operate as a complete general previous restraint on the exercise of the constitutional rights of free speech and assembly. The right of assembly is not restricted to meetings "to petition the government for a redress of grievances." The limits of permissible regulation were exceeded in this act in its denial to unincorporated labor unions and their individual members of any right to assemble and function in the field of union activities for the promotion of their common welfare by lawful means.

The same act provided that no strike should be lawful unless authorized by a majority vote in a secret ballot, "such as is provided in the act." This clause was held invalid on the special ground that the ballot provisions were an inseparable part of the unconstitutional incorporation requirements. As to all other clauses, the Supreme Court of Colorado vacated the decision of the lower court because the court should not have considered those clauses at all in a declaratory judgment proceeding but should have waited for an actual case to arise. The Colorado act had a clause which said "nor shall anything in this act be so construed as unlawfully to invade the right to freedom of speech." The court said that this clause will not salvage the improper requirement of incorporation.

[19] ——Pac (2d) ——, Dec. 21, 1944.

South Dakota union-control law constitutional in part.—Through a declaratory judgment in *American Federation of Labor* v. *Mickelson* [20] the Circuit Court of South Dakota separated the constitutional from the invalid provisions of the union-control act of that State. Held valid were the requirements that officials of labor unions which are active in the State must file annual financial reports for the union, including income and expense accounts and statements of officers' salaries.

Held invalid was a clause forbidding labor-union officers, agents, or employees from entering agricultural premises without the owners' consent, [21] to collect dues, fines or assessments, or to solicit members or promote a strike or interfere with activities on the property; a clause forbidding the picketing or an order for picketing the home of an agricultural worker; a clause forbidding any boycott as to movement to market or sale of farm products grown by nonunion workers; a prohibition against any person's asking or accepting money from an agricultural employer because of services past, present, or promised arising from the labor-union connections of such person.

The reasons for invalidity included violation of right of assembly and of free speech, denial of the right of confrontation, the right to know the accusation, impairment of obligation of contract, denial of equal protection of laws and of due process, and an attempt by legislation to interfere with interstate commerce.

Effect of work stoppage under New York Labor Relations Act.—An order of the New York Labor Relations Board enjoining unfair labor practices and ordering reinstatement, with pay, of two discharged employees was modified as to the latter part and otherwise affirmed by the Supreme Court of New York in *New York State Labor Relations Board* v. *Union Club.*[22] It appeared that the management, after certification of the union, had not been prompt in concluding an agreement. The board's finding of bad faith was, according to the court, not reviewable, since it was an inference as to fact, drawn from conflicting evidence, and reasonable minds might differ about it.

As a protest against the delays in bargaining, two employees had, during rush periods, participated in planned work stoppages. These stoppages occurred seven times and in all cases the employees remained on the premises. On the last occasion, the manager drew, by lot, names of various employees who were standing around during such a work stoppage and directed each by name to return to work. Two alone refused to obey and they alone were discharged. The board found that this was a discriminatory discharge and therefore ordered reinstatement. The court reversed on the ground that there was no evidence to support that finding, since those who returned to work when directed were not fired. Analyzing the situation further, the court said that the employees in question were not on strike, because they did not abandon work until their demands were met; neither did they continue to work while negotiating. On the contrary, in disobeying the reasonable instructions of the master while remaining on the job, they violated their duty in the employer-employee relationship and indulged in conduct which cannot be treated as lawful on the ground of being within the allowable area of economic conflict. The court did

[20] ——N. W. (2d) ——, Nov. 17, 1944.
[21] Compare decision in *A. F. L.* v. *Miller* (Monthly Labor Review, February 1945, p. 335), holding similar clauses valid as protecting real estate from trespassers.
[22] —— N. Y. Supp. (2d) ——, Dec. 22, 1944.

not say that distribution of circulars while remaining on the job would not be lawful concerted activity or that a temporary work stoppage would have been unlawful, though neither would have justified a discriminatory discharge. Here the court considered that, though there was no disorder or criminal conduct, the stoppage was part of a concerted campaign of disobedience, which differs only in degree from a sit-down strike or taking control of the business from the employer.

Another question which arose resulted from the fact that the dispute as to bargaining had been referred to the National War Labor Board; this caused the employer to challenge the jurisdiction of the State board. The court found no present conflict between the action of the State and Federal tribunals. If the order of the State board directs an unnecessary step, or a conflict of authority arises in the future, the problem will be solved when the State board seeks to punish for contempt for failure to comply with its order. The board's order is judged proper or not proper on the basis of conditions at the time it is made, unless a paramount public authority has intervened and made an order which, by creating a conflict, makes enforcement of the earlier order undesirable.

Board's designation of eligible voters for union election reversed.—The State Labor Relations Board in November 1941 had found an employer guilty of unfair labor practices but had (erroneously, it was later decided) designated a union as bargaining agent instead of holding an election. To remedy this error, in December 1943 the State board conducted an election, excluding from voting all employees who had not been on the pay roll in November 1941. Only 7 of the 26 employees of that date were still on the pay roll. The others had left of their own accord. Ten of the 19 ex-employees voted in the election and the union was chosen by a majority of 10 to 7. The employer and a majority of those employed at the time of the election objected to the certification, and the employer refused to bargain. In proceedings to compel bargaining (*In re Shafer Coach Lines*),[23] the Supreme Court of Pennsylvania cancelled the certification. It distinguished the rule of the Supreme Court of the United States [24] that, to correct unfair labor practices, bargaining must be enforced in favor of the union which represented the majority at the time of the wrongful refusal to bargain. In the present case, the employer did not refuse an election and was right in considering the designation of a union not lawful. The Court therefore found no consideration of policy warranting the retroactive date for the eligibility of voters which would justify forcing on present employees, for at least a year, a union which they had not chosen.

Breach of no-strike contract enjoined under Wisconsin law.—In Wisconsin, the State Supreme Court affirmed a judgment of the lower court in *Public Service Employees' Union* v. *Wisconsin Employment Relations Board*.[25] That judgment had restrained the union from striking against the Wisconsin Gas & Electric Co. and enjoined the union president from acting in any capacity for the employees for the period of a year. The National Labor Relations Board had not taken jurisdiction of the controversy, and on this ground and because

[23] —— Atl. (2d) ——, Nov. 8, 1944.
[24] *Franks Brothers* v. *N. L. R. B.*, —— Sup. Ct. ——
[25] —— N. W. (2d) ——, Dec. 19, 1944.

the National Labor Relations Act does not create private rights, enforceable at the suit of private parties, the State courts held the State board was free to act, enforcing State law.

Under the Wisconsin Employment Peace Act, it was an unfair labor practice to strike in violation of a contract and to fail to arbitrate when the contract provided for arbitration. Further, the strike was improper because not based on the preliminary vote required by the State act. The argument that the injunction entered by the lower court as to the union was in violation of the fourteenth amendment to the Constitution was disposed of by stating that the union was not itself an employee of the company and is not protected by the fourteenth amendment in any right to do what the Board's order forbade, i. e., violate the contract. The union has no right to strike, walk out, or stop work. The court refused to consider the constitutional right to free speech in the form of picketing as being involved in this case, or to consider certain arguments relating to the union president, on the ground that they had not been argued before the court below or made an issue in the appeal.

California law against employer interference with employees' politics constitutional.—The District Court of Appeal in California was required, in the case of *Lockheed Aircraft Corporation* v. *Superior Court of Los Angeles*,[26] to analyze those sections of the California Labor Code which provide that no employer shall make or enforce any rule or policy forbidding employees from engaging in politics or becoming candidates for office; and no employer shall control the political activities or affiliations of employees or coerce them in that regard by threats of discharge. The act made violation a criminal offense. The sections of the code involved were held valid by the court, which rejected challenges to the act under the California and United States Constitutions based on the following claims: That "politics" and "political activities" are too indefinite to be understood by the ordinary man; that the section limits freedom of contract unjustifiably; and that it deprives employers of the right of free speech. The court interpreted the act as giving the injured employees a civil remedy.

[26] — Pac. (2d) —, Dec. 6, 1944.

Wage and Hour Statistics

Average Hourly Earnings in the Explosives Industry, June 1944[1]

Summary

EARNINGS of workers in plants manufacturing smokeless powder, TNT and DNT, black powder, and dynamite ranged from a general average of 92 cents an hour in smokeless-powder plants to $1.08 an hour in the dynamite plants, according to a Bureau of Labor Statistics wage survey. The relatively low average for smokeless-powder plants is accounted for, at least in part, by the fact that this segment of the industry employed large numbers of workers in jobs requiring a less amount of skill or experience and therefore commanding a lower rate of pay. Although the workers in the dynamite branch of the industry had, on the whole, the highest average earnings, averages for the individual occupations were not consistently higher than those for similar occupations in the other three branches.

The production of smokeless powder constitutes the largest branch of the industry in terms of numbers of workers employed. The average earnings for workers studied in 85 selected occupations ranged from 64 cents an hour for janitresses to $1.44 an hour for lead burners. Approximately 60 percent of the workers were classified in those occupations with average earnings ranging from 75 cents to $1.00 an hour. In general, the highest earnings for any one department were paid to maintenance workers. Operators in the processing occupations were paid average earnings ranging from 75 cents an hour for female powder-cutting operators to $1.08 an hour for ether-house operators. Helpers on the powder-making line constituted the largest occupational group, with average hourly earnings of 82 cents for males and 72 cents for females.

The average earnings for individual occupations in the TNT plants studied ranged from 61 cents an hour for janitresses to $1.39 an hour for class A millwrights. Fully half of the workers, however, were employed in occupations having average earnings which ranged from 90 cents to $1.15 an hour. Average hourly earnings of working foremen in the processing departments amounted to $1.14 an hour. Workers in three processing occupations, bi-tri operators, DNT nitrator operators, and fortifier operators, earned an average of $1.11 an hour, the highest average shown for processing operators. The lowest average rate for processing operators (96 cents an hour) was paid to DNT sweat-house operators and to pumpmen in the acid area. Male guards, who constituted a numerically important group among the custodial occupations, earned an average hourly rate of 84 cents.

[1] Prepared in the Bureau's Division of Wage Analysis by Edith M. Olsen under the direction of Victor S. Baril.

The hourly earnings of material-movement workers varied from an average of 77 cents for loaders and unloaders to $1.19 for yard conductors. Workers employed as packers of DNT and TNT earned 93 cents an hour.

Three-tenths of the workers in black-powder plants were concentrated in occupations whose hourly earnings ranged from 90 cents to $1.00, and four-tenths were employed in occupations averaging between $1.00 and $1.15 an hour. The average earnings for individual occupations ranged from 76 cents an hour for watchmen to $1.32 an hour for class A machinists.

Occupational earnings in the dynamite branch of the industry ranged from 76 cents an hour for watchmen to $1.46 an hour for class A millwrights. Nearly two-thirds of the workers studied were employed in occupations whose earnings ranged from 95 cents to $1.20 an hour; well over a fifth were classified in the occupational groups earning average rates in excess of $1.20 an hour.

Characteristics of the Industry[2]

The explosives-manufacturing industry in the United States is relatively small in peacetime. Its production is limited largely to the types of explosives used as blasting agents in mining and quarrying, in railway and other construction work, and in the accomplishment of other projects essential to modern living. Chief among the explosives used for these purposes are black powder and various forms of dynamite. Although both of these peacetime or industrial explosives also have important wartime uses, it is the production of such military explosives as smokeless powder and TNT that constitutes the major part of the wartime explosives industry. The survey on which this report is based covered plants manufacturing both industrial and military explosives, specifically smokeless powder, TNT and DNT, black powder, and dynamite. No attempt was made to cover the many types of explosives that, although of primary importance from a military standpoint, are produced in few plants, or employ only relatively small numbers of wage earners.

TYPES OF EXPLOSIVES

Explosives may be divided into two separate classes—high explosives and mild, or low, explosives. The distinction is made on the basis of the use to which the explosive is put, which in turn depends largely upon the speed of reaction after the charge has been set off. Thus, certain mild explosives, whose rate of combustion is relatively slow, and which build up pressure gradually, are used as propellants. The function of the propellant charge is to exert enough pressure on the shell to force it from the muzzle of the gun at the necessary rate of speed. Explosives which burn with such rapidity as to cause almost instantaneous reaction are classed as high explosives. Because of their extremely rapid reaction, high explosives are not suited for use as propellants. Certain high explosives with great shattering power are used as the bursting charge in many different types of

[2] A description of the various industrial processes in the manufacture of explosives will be included in a forthcoming bulletin.

military projectiles. The function of the bursting charge is to shatter the metal shell or bomb case into fragments at the proper point. Small amounts of very sensitive high explosives are also used as detonating agents to initiate explosion of the main propellant or bursting charge.

Smokeless powder is the universally used propellant in fixed and separate loading ammunition for cannon and in small-arms ammunition. It has replaced black powder, which until the latter part of the 19th century was the most common propellant. Smokeless powder is superior to black powder for this purpose in a number of ways; it causes less smoke, leaves less solid residue after burning, and does not absorb as much moisture. Most of the smokeless powder produced in this country has a straight nitrocellulose base and is manufactured in the form of perforated cylindrical grains. Practically the only peacetime use of smokeless powder, aside from the small amount required by the military services, is in sporting weapons.

Trinitrotoluene, commonly known as TNT, is one of the most important military high explosives and is used extensively as a bursting charge in shells, bombs, grenades, torpedo warheads and naval mines. It is also used in military demolition work, and as a constituent of various types of dynamite. Although suitable for blasting, it has not had widespread use for this purpose because of the relatively higher cost as compared with commercial dynamites. TNT has many properties which render it superior to any other known disruptive explosive for military use. It has a low melting point and can be easily melted and poured into shells and bombs, either alone or mixed with ammonium nitrate to form amatol; it does not combine with metals, so that no protective coating is needed to line the inside of the shell. Although it is a powerful explosive, TNT can be manufactured, stored, and transported with comparative safety because it is stable and is relatively insensitive to shock or friction. Dinitrotoluene (DNT) is used principally as a modifying agent in other explosives, notably in smokeless powder for the purpose of reducing moisture absorption.

Black powder is a mild explosive, and although it is no longer in general use as a propellant, it still has important military uses, principally in the manufacture of fuzes and as the igniter charge in artillery primers. Black powder is manufactured on a large scale for peacetime purposes in both granular and pellet form. The bulk of the black powder produced in the United States before the war was used for blasting in mines, quarries, and construction work; small amounts were also consumed in the manufacture of fireworks and ammunition.

Dynamite is a high explosive and is the most important industrial explosive in use at the present time. It does not, however, meet the rigid specifications of a good military high explosive. Its usefulness in military operations is therefore confined to such functions as the destruction of railroads and bridges. Most of the dynamite produced in peacetime is normally consumed for heavy blasting work by the mining and construction industries. There are several types of dynamite, each having properties making it most efficient for specific purposes. For example, dynamites containing a high percentage of ammonium nitrate are particularly suited for use in coal mines where gas explosions are likely to occur, and are therefore approved as "permissible" explosives by the U. S. Bureau of Mines.

WARTIME DEVELOPMENT OF THE INDUSTRY

At the beginning of the present war in Europe, the United States lacked facilities for the production of explosives suitable for military use on the scale required to conduct a war. It became necessary, therefore, for the Government to build a number of large, new plants for the mass production of both smokeless powder and TNT, and, in addition, plants that could produce certain raw materials essential to the manufacture of military explosives. Most of these Government-owned plants were put under the management of private companies experienced in the explosives field and having some of the necessary technical personnel to operate on an efficient basis.

Munitions production during World War I was carried on mainly in the Northeastern States. The great new plants built for the present war are distributed throughout the interior States of the country, where they are less vulnerable to possible enemy attack. Only three States had more than one plant manufacturing smokeless powder or TNT at the time of the Bureau's study; each of these States had two plants. In addition to strategic considerations, the new plant sites were selected with careful regard to such important economic factors as the availability of labor and the supply of natural resources. Most of the large new plants producing smokeless powder and TNT were therefore situated at some distance from already crowded industrial centers.

Establishments manufacturing black powder and dynamite, most of which were in operation before the beginning of the present war, are located near the centers of demand, and are very widely scattered geographically. As the greatest demand comes from the mining industries, the establishments manufacturing these industrial explosives are found throughout the important coal- and metal-mining States. Although most of the States had only one or two plants, there were 10 in Pennsylvania, 5 in Illinois, and 3 each in Ohio, Washington, and Missouri. All of the black-powder and dynamite plants surveyed were privately owned and operated.

Scope and Method of Study

This report, as previously stated, is based on a Bureau survey of the earnings of workers in establishments manufacturing smokeless powder, TNT and DNT, black powder, and dynamite. The survey included virtually all plants engaged in the production of these explosives, and employing nine or more wage earners. The data for one small black-powder plant were weighted to include another plant in the same locality, which was not scheduled, but which was operated by the same company and had the same general occupational and wage structure. Fifty-six plants, having a total of approximately 50,700 employees, were studied. Most of these plants specialized in the production of one of the explosives included in the survey, but six were producing two of these products—two manufactured smokeless powder and TNT; two, TNT and dynamite; one, smokeless powder and dynamite; and one, black powder and dynamite. Workers in these six establishments have been classified according to the specific product they were producing at the time of the survey. The wage data presented for the various branches of the industry, therefore, relate to the production of smokeless powder in 10 plants, TNT in

10 plants, dynamite in 29 plants, and black powder in 13 plants. Four of the TNT plants were also producing DNT.

The 56 plants studied were operated by 19 different companies. Three large companies, however, are dominant in the industry. Together, these three companies operated 34 of the 56 plants and employed over 80 percent of the workers studied. All but 4 of the 13 Government-owned smokeless-powder and TNT plants in production at the time of the survey were operated by these 3 companies.

The wage data on which this report is based were collected by experienced field representatives of the Bureau, who visited the plants and transcribed the information from pay rolls and related plant records. The earnings data relate, in most plants, to a typical June 1944 pay-roll period. The occupational wage data represent straight-time average hourly earnings, excluding premium overtime payments and shift differentials.

Detailed occupational wage data are shown for a total of 28,921 workers employed in key occupations selected for study in each branch of the industry. These selected occupations account for well over three-fifths of the plant workers employed in the establishments studied, and are believed to represent adequately the various skill and earnings levels in the industry. In order to obtain maximum comparability among the various establishments studied, standard occupational descriptions were used in classifying all workers in each of the plants studied. The duties performed by workers included within the individual occupations are, therefore, believed to be closely comparable for all plants.

In addition to the occupational wage data, such related items as number of shifts operated, method of wage payment, extent of unionization, entrance rates paid to male common labor, and the policy of the company concerning the payment of overtime and differentials for work on late shifts, were also obtained for each establishment.

The Labor Force

The wartime development of the explosives-manufacturing industry involved the recruitment and training of thousands of inexperienced workers within a very short period of time. Although the black-powder and dynamite plants have expanded somewhat to meet the added demands brought on by the war, the recruitment of new workers for these plants was on a much smaller scale than in the production of smokless powder and TNT. The production of these latter products may, in fact, be considered in the nature of a new industry. Since only a small number of people were trained for work in the manufacture of these products before the war, it was necessary to carry on extensive training on the job as new plants started production. Many of the workers employed by these plants were recruited from rural areas and were entering the industrial labor force for the first time.

CHARACTERISTIC JOBS

Many of the jobs involved in the manufacture of explosives require a considerable degree of skill, detailed knowledge of processes, and much responsibility. In the acid area, for instance, the experienced workers are responsible for certain operating units which, while largely

automatic, require careful tending of the dials and gauges which indicate their operation. In the acid area, as in other departments, many of the plants start new workers as helpers, and upgrade them to other jobs in the area after they have learned the operations by observation and have been thoroughly trained to observe safety rules.

Many of the occupations on the smokeless-powder line involve the operation of machines. About 15 percent of the workers studied in this department were employed on the operation of the large presses which are used at various stages in the process for dehydrating, blocking, screening, and graining the powder. These operations entail heavy work and are usually performed by men. Some degree of mechanical ability is necessary for the actual performance of the duties connected with these jobs, but the prime requirement is that the operator be mentally alert and that he be thoroughly familiar with all phases of the particular operation on which he is working. The graining-press operator, for example, operates the machine that produces extruded strands of powder which are later cut into the desired length to form grain powder. His specific duties include loading the blocks of powder into the press, applying the proper amount of pressure to regulate the rate of extrusion, and directing the powder strands into the proper containers. He is also responsible for watching the quality of the powder strands, for checking the dies for proper performance, and for close observation of the pressure gauge. The press and the floor must be kept clean and free of scrap powder at all times.

Another numerically important group of workers consists of the powder-cutting operators. The function of the powder-cutting machine is to cut the extruded strands of powder into specified lengths. The duties of the operators consist of feeding the powder strands into the guide holes of the machine, adjusting the speed of the feed mechanism to cut grains of a specific size, and transferring the cut powder from the fiber containers, into which it falls, to carts or cars. The actual operations of starting and stopping the machine are usually performed by men, while women are employed mainly to feed the strands of powder into the machines. Helpers constituted the largest occupational group on the smokeless-powder line at the time of the survey. These workers are distributed throughout the different operations on the powder-making line. Their duties are varied and include such work as assisting the machine operators, handling the materials needed in the various operations, and assisting with the cleaning of equipment.

Among the more highly skilled workers in the plant are those employed in the various crafts in the maintenance departments. The workers requiring the least amount of skill are those classified in such indirect jobs as janitors, coal handlers, and loaders and unloaders.

WORKING CONDITIONS

Recruitment of a sufficient labor force in explosives plants is hampered somewhat by the inherent hazard of the industry. Extraordinary safety precautions must be observed in the construction and maintenance of the plant. All of the new Government-owned plants and most of the privately owned plants in operation before the war are in isolated areas. The plants cover large tracts of ground and the

manufacturing operations are performed in widely separated buildings. The grounds are well fenced and are protected by armed guards.

Careful instruction with regard to safety precautions is, of course, an essential part of the program of training workers for employment in explosives plants. Rigid safety rules are enforced by management and must be observed by each worker for his own safety as well as for that of fellow workers. The number of persons and amount of explosive material allowed in any one building at a given time are generally very strictly limited. Carrying matches into the production areas is always prohibited; shoes with nails are likewise outlawed, and the workers are generally required to wear special "powder" shoes on the production lines. Some housekeeping and clean-up duties are a part of nearly all jobs. As a result of the extreme measures taken by the companies for the protection of workers, the explosives-manufacturing industry has maintained a remarkably low accident-frequency record in spite of heavy production schedules.

All but 8 of the 41 establishments manufacturing black powder and dynamite employed fewer than 250 workers at the time of the survey. Three of the 8 plants with more than 250 workers were dynamite plants that also manufactured either smokeless powder or TNT. Excluding these 3 plants, smokeless powder and TNT were manufactured in 15 additional plants. The smokeless-powder and TNT plants were considerably larger than the dynamite and black-powder plants, as 13 of the 15 were new Government-owned plants. The plant employment for establishments producing these two explosives ranged from about 700 to more than 7,000.

Women constituted about 22 percent of the labor force employed by the 56 plants studied. The employment of women workers varied somewhat among the different branches of the industry. Women are not generally employed in black-powder plants; at the time of the survey, a small number were employed in the occupations studied, by only one plant. In dynamite-manufacturing plants, only about 7 percent of the workers for whom occupational wage data are shown were women. These workers were employed in such light work as that of shell rollers, shell-house helpers, dynamite loaders' and mixers' helpers, routine testers, and dynamite packers. Similarly, in TNT plants, women accounted for less than 7 percent of the workers studied, and were employed only as helpers in the TNT area, as technicians and testers, and as timekeepers, guards, and janitresses. The largest number of women workers in the industry were employed in smokeless-powder plants, where they accounted for well over a fifth of the workers studied. By far the majority of these workers were employed as helpers in the nitrocellulose area and on the powder-making line, although a large number were also employed as powder-cutting operators and as technicians. None of these occupations involve particularly heavy work.

Workers in explosives-manufacturing establishments are not widely organized into labor unions. Although 17 of the plants studied reported union agreements, only about a fifth of the workers were employed by these plants. Seven of these plants had agreements with affiliates of the American Federation of Labor, 5 had agreements with unions affiliated with the Congress of Industrial Organizations,

and 5 were operating under agreements with the United Mine Workers of America.

Wage-Payment Practices

Workers employed in the explosives-manufacturing industry are paid almost exclusively on a straight-time basis. The smokeless-powder and TNT plants employed no workers under incentive methods of wage payment, while only about 1 percent of the workers in dynamite and black-powder plants were paid on an incentive basis. The few incentive workers found in the dynamite plants were nearly all machine dynamite loaders; most of those found in the black-powder plants were machine pellet wrappers. Seven plants reported length-of-service bonuses.

Multiple-shift operations were reported by 42 of the 56 plants included in the survey. Of the total number of workers employed by the establishments studied, about a half were working on the first shift, slightly more than a fourth on the second, and slightly less than a fourth on the third. The 14 plants having only one shift were all dynamite and black-powder plants. Most of the workers (76 percent) in these two branches of the industry were, therefore, employed on the first shift, with 15 percent on the second and 9 percent on the third. The distribution of workers by shift was more uniform in smokeless-powder and TNT plants; 46 percent were employed on the first shift, about 28 percent on the second, and 26 percent on the third shift. Twenty plants reported the weekly or biweekly shift rotation of production workers.

Twenty-six of the 42 plants reporting more than one shift in operation also reported the payment of shift differentials. These differentials ranged from 2 to 5 cents an hour over the day-shift rates for the same occupations. All plants reporting the payment of shift differentials paid the same amount for the second and third shifts.

Most of the plants studied were on a 48-hour week schedule. There was very little variation in overtime-payment policies from one plant to another. All of the plants studied paid time and a half for work in excess of 40 hours a week, and all but 4 of the plants also paid this overtime rate for work after 8 hours a day. Work on recognized holidays (in most cases the 6 holidays named by Executive order) was paid for at the rate of time and a half in 52 plants. Double time was paid for work on the seventh consecutive day in 46 plants.

Established entrance rates for male common labor were reported by 48 of the 56 companies. These entrance rates ranged from 50 cents an hour in one plant to 91 cents in another. Thirty-nine plants, however, reported entrance rates for male common labor within the narrower range of from 60 to 80 cents.

Occupational Earnings

Straight-time average hourly earnings for the selected occupations in each branch of the explosives industry are shown, by plant department, in the table on page 614. Because of the small number of plants and companies involved in each branch of the industry it was not feasible to present figures by region. An analysis of the earnings data for plants in different regions, however, indicates that there are no consistent geographical variations in the industry.

SMOKELESS POWDER

The production of smokeless powder constitutes the largest branch of the industry in terms of numbers of workers employed. The average hourly earnings data are for 19,118 workers, employed in 10 plants manufacturing smokeless powder, and classified into 85 selected occupations. Straight-time average earnings of all workers covered in these occupations amounted to 92 cents an hour. The general average for men was 97 cents an hour and for women 72 cents. The lower average for women results from the fact that most of them are employed as helpers and in the lower-paid occupations.

The range in rates was from 64 cents an hour for janitresses to $1.44 an hour for lead burners. The majority of the workers, however, were paid average earnings falling within a much more limited range. Approximately 60 percent were classified in those occupations having average earnings ranging from 75 cents to $1.00 an hour. Average earnings in the interval between 75 and 80 cents an hour accounted for fully a tenth of the workers, while somewhat more than an eighth were in occupations having average earnings of 80 to 85 cents an hour. The greatest concentration of workers occurred in the 19 occupations with earnings between 90 and 95 cents an hour. Nearly a fourth of the workers were employed in these occupations.

In general, the highest earnings for any one department were paid to maintenance workers, who accounted for 18 percent of all workers studied. With the exception of oilers and journeymen's helpers, all workers in the maintenance group were paid hourly rates of well over $1.00 an hour. Working foremen in the processing departments averaged $1.07 an hour. Operators in the processing occupations were paid average earnings ranging from 75 cents an hour for female powder-cutting operators to $1.08 an hour for ether-house operators. Helpers on the powder-making line constituted the largest occupational group, with earnings of 82 cents an hour for men and 72 cents for women. The apparent margin between the earnings of males and those of females within the same occupation actually reflects a difference in duties. The male workers generally perform the heavier work, whereas the women are assigned a number of duties throughout the powder line which do not require the lifting of heavy objects.

Workers in four of the occupations in the acid area, acid-recovery operators, compressor operators, nitric-acid concentrator operators, and sulphuric-acid concentrator operators, were paid $1.00 or more an hour. The acid area employed relatively few workers as compared with those employed in the nitrocellulose area and powder line. Acid helpers, the occupation in which the largest number of workers was classified, earned an average of 83 cents an hour.

Nitrator operators, numerically the most important occupation in the nitrocellulose area, were paid hourly rates averaging 90 cents an hour. The highest average earnings in this area were those of cotton-picker operators and nitrating acid mixers. Both of these small groups earned an average of 99 cents an hour. Male and female helpers had respective average earnings of 79 and 75 cents an hour.

On the powder-making line, employees in only three occupations (activated-carbon operators, ether-house operators, and inert-gas operators), each accounting for a small number of workers, earned average rates of $1.00 or more an hour. Aside from helpers, female

powder-cutting operators and male mixer operators formed the largest occupational groups. The respective earnings of these two groups amounted to 75 and 90 cents an hour.

Of the indirect workers other than maintenance craftsmen, the highest hourly earnings were paid to locomotive engineers ($1.26) and to stationary engineers in the powerhouse ($1.24). Truck drivers and power truckers, together accounting for the majority of the material-movement workers, averaged 82 and 85 cents an hour, respectively. Loaders and unloaders averaged only 70 cents an hour. Among the custodial occupations, firemen and male guards averaged 93 cents an hour and the small group of female guards, 71 cents.

TNT AND DNT

Earnings data for TNT and DNT are shown in the table for 10 plants, four of which were producing DNT at the time of the survey, and cover 6,492 workers in 66 selected occupations. For this branch of the explosives industry as a whole, the workers studied were paid, on the average, $1.01 an hour; the hourly average for all male workers studied amounted to $1.02, or 22 cents more than the average for women, who were employed only in indirect jobs and as helpers in the TNT area. It will be noted that these general averages for TNT plants are somewhat higher than those for the smokeless-powder plants. This difference is due partly to the fact that larger proportions of the workers in smokeless-powder plants are employed as helpers. Furthermore, workers in the TNT and DNT area are paid higher average hourly earnings than workers in most occupations found in either the nitrocellulose area or on the smokeless-powder line.

The average hourly earnings for individual occupations in the TNT plants studied ranged from 61 cents for janitresses to $1.39 for class A millwrights. Fully a half of the workers, however, were employed in occupations having average earnings which ranged from 90 cents to $1.15 an hour. Roughly an eighth of the workers were in occupations with average earnings ranging from 90 to 95 cents, and nearly a fifth in occupations averaging from $1.10 to $1.15 an hour.

The maintenance workers are paid higher average hourly earnings, on the whole, than workers in any other single department. Oilers, earning 91 cents an hour, and journeymen's helpers, earning 84 cents an hour, were the only maintenance workers not having average earnings of well over $1.00. Class A maintenance mechanics, comprising the largest group of workers in the department, earned an average hourly rate of $1.34. A comparison of the earnings of workers in those maintenance occupations found in both the smokeless-powder and TNT branches of the industry reveals that although workers in TNT plants are paid higher average rates in a number of occupations, this advantage is not consistent. Moreover, the difference in the average earnings per hour amounts to only 5 cents or less in all but 4 of the occupations.

Average hourly earnings of working foremen in the processing departments amounted to $1.14 an hour. Workers in three processing occupations, bi-tri operators, DNT nitrator operators, and fortifier operators, earned an average of $1.11 an hour, the highest average shown for processing operators. The lowest average for processing

operators (96 cents an hour) was earned by DNT sweat-house operators and pumpmen in the acid area.

Workers in all but three of the occupations in the acid area, helpers, pumpmen, and sellite-mix men, had average earnings in excess of $1.00 an hour. The earnings of these workers amounted to 93, 96, and 98 cents an hour, respectively. Similarly, the only occupational groups earning an average of less than $1.00 an hour in the TNT and DNT area were DNT sweat-house operators and helpers. The average earnings of male helpers amounted to 86 cents an hour, and those of female helpers to 88 cents. Female helpers were employed in only four plants.

Male guards, who constituted a numerically important group among the custodial occupations, averaged 84 cents an hour. Earnings of material-movement workers varied from an average of 77 cents an hour for loaders and unloaders to $1.19 for yard conductors. The highest-paid workers in the powerhouse were stationary engineers, with average earnings of $1.35 an hour. Workers employed as packers of DNT and TNT earned 93 cents an hour.

BLACK POWDER

Detailed earnings data were obtained for 431 workers engaged in the production of black powder, the smallest branch of the industry included in the study. These workers, employed in 13 plants, were classified into 37 selected occupations. As mentioned earlier, women were employed in these occupations in only one plant; earnings data for women workers are, therefore, not shown.

For the 431 male workers as a group, average earnings amounted to $1.00 an hour. The average hourly earnings for individual occupations ranged from 76 cents for watchmen to $1.32 for class A machinists. Three-tenths of the workers were concentrated in those occupations in which hourly earnings ranged from 90 cents to $1.00, and four-tenths in those averaging between $1.00 and $1.15 an hour.

Among the processing occupations, wheel-mill operators, hydraulic-press operators, and pellet-press operators constituted the most important groups in terms of numbers of workers. Earnings for these three groups averaged $1.11, $1.15, and $1.04, respectively. Working foremen were paid an average of $1.12 an hour. Watchmen, whose average hourly earnings amounted to 76 cents, were the only workers paid less than an average of 80 cents an hour.

DYNAMITE

Altogether, 2,880 workers, employed in 29 plants, were classified in the 65 occupational groups selected for study in the dynamite branch of the explosives industry. As a whole, these workers earned an average of $1.08 an hour. The general average for all male workers studied amounted to $1.09 an hour, while that for the 191 women workers was 89 cents an hour. Women were generally employed only as helpers or in light work.

As in the other three branches of the industry, the range in average hourly earnings between the lowest- and the highest-paid occupations was very wide, amounting in this case to 70 cents. Watchmen, the lowest-paid occupational group, earned 76 cents an hour; class A

Straight-Time Average Hourly Earnings of Workers in Selected Occupations of the Explosives Industry, June 1944

SMOKELESS-POWDER BRANCH

Occupation	Number of workers	Average hourly earnings
Maintenance		
Blacksmiths	15	$1.27
Carpenters, class A	415	1.21
Carpenters, class B	86	1.04
Electricians, class A	207	1.32
Electricians, class B	45	1.13
Helpers, journeymen, male	305	.91
Helpers, journeymen, female	18	.75
Instrument repairmen	64	1.25
Lead burners	28	1.44
Machinists, class A	132	1.32
Machinists, class B	32	1.14
Mechanics, automotive	192	1.13
Mechanics, maintenance, class A	302	1.30
Mechanics, maintenance, class B	304	1.12
Millwrights, class A	365	1.31
Millwrights, class B	107	1.13
Oilers	60	.91
Painters	93	1.11
Pipefitters, class A	335	1.33
Pipefitters, class B	83	1.15
Scale repairmen	32	1.15
Sheet-metal workers, class A	70	1.30
Sheet-metal workers, class B	21	1.08
Tool and die makers, class A	21	1.26
Welders, hand	90	1.27
Supervision		
Working foremen, processing departments	1,167	1.07
Processing		
Acid area:		
Acid-recovery operators	26	1.03
Ammonia-oxidation operators	45	.99
Compressor operators	29	1.01
Helpers, acid area	172	.83
Mixed-acid operators	58	.97
Nitric-acid concentrator operators	50	1.00
Oleum-plant operators	18	.95
Pumpmen	33	.93
Sulphuric-acid concentrator operators	36	1.00
Waste-water operators	11	.82
Nitrocellulose area:		
Beater operators	46	.95
Blenders, nitrocellulose	79	.89
Boiling-tub operators	107	.92
Cotton dry and weigh operators	174	.84
Cotton-picker operators	57	.99
Cotton-wringer operators	500	.93
Helpers, nitrocellulose area:		
Male	568	.79
Female	530	.75
Nitrating acid mixers	72	.99
Nitrator operators	681	.90
Poacher operators	90	.92
Powder-making line:		
Activated carbon operators	46	1.00
Air-dry operators	84	.91
Blender operators, smokeless powder	162	.99
Block-press operators	288	.88
***Processing*—Continued**		
Powder-making line—Continued.		
Chemical-preparation operators	20	$0.96
Coating-house operators	41	.97
Dehydrating-press operators	267	.95
Ether-house operators	41	1.08
Ether-mix operators	15	.97
Glazing operators	43	.93
Graining-press operators	363	.94
Helpers, powder-making line:		
Male	1,863	.82
Female	2,153	.72
Inert-gas operators	10	1.04
Macaroni-press operators	250	.95
Mixer operators, smokeless-powder	721	.90
Powder-cutting operators:		
Male	170	.93
Female	952	.75
Screen and pack operators	239	.97
Solvent-recovery men	165	.95
Water-dry operators	65	.91
Inspection and testing		
Routine testers, laboratory	31	.91
Technicians, male	131	.91
Technicians, female	315	.70
Packing		
Packers, smokeless powder	115	.91
Powerhouse		
Coal handlers	72	.72
Engineers, stationary	58	1.24
Firemen, stationary boiler	56	1.17
Water tenders	29	.94
Recording and control		
Magazine keepers	44	.88
Stock clerks	89	.95
Stock men	37	.88
Timekeepers	36	.84
Tool clerks	14	.89
Material movement		
Brakemen, yard	28	1.05
Conductors, yard	23	1.17
Engineers, locomotive	30	1.26
Loaders and unloaders	149	.70
Truck drivers	307	.82
Truckers, power	244	.85
Custodial		
Firemen, plant protection	143	.93
Guards, male	771	.93
Guards, female	48	.71
Janitors	304	.71
Janitresses	115	.64

Straight-Time Average Hourly Earnings of Workers in Selected Occupations of the Explosives Industry, June 1944—Continued

TNT–DNT BRANCH

Occupation	Number of workers	Average hourly earnings
Maintenance		
Blacksmiths	6	$1.18
Carpenters, class A	119	1.26
Carpenters, class B	21	1.09
Electricians, class A	97	1.36
Electricians, class B	19	1.14
Helpers, journeymen	87	.84
Instrument repairmen	33	1.29
Lead burners	39	1.37
Machinists, class A	41	1.33
Machinists, class B	22	1.14
Mechanics, automotive	92	1.17
Mechanics, maintenance, class A	180	1.34
Mechanics, maintenance, class B	34	1.10
Millwrights, class A	88	1.39
Millwrights, class B	31	1.15
Oilers	28	.91
Painters	44	1.11
Pipefitters, class A	141	1.34
Pipefitters, class B	82	1.13
Scale repairmen	8	1.18
Sheet-metal workers, class A	18	1.32
Welders, hand	42	1.26
Supervision		
Working foremen, processing departments	189	1.14
Processing		
Acid area:		
Acid-recovery operators	173	1.07
Ammonia-oxidation operators	74	1.08
Compressor operators	32	1.10
Helpers, acid area	87	.93
Mixed-acid operators	50	1.08
Nitric-acid concentrator operators	52	1.06
Oleum-plant operators	25	1.04
Pumpmen	139	.96
Sellite-mix men	39	.98
Sulphuric-acid concentrator operators	62	1.07
Waste-water operators	34	1.06
TNT and DNT area:		
Bi-tri operators	400	1.11
DNT-nitrator operators	16	1.11
Fortifier operators	161	1.11
Grainers, TNT	49	1.05
Helpers, TNT and DNT:		
Male	331	.86
Female	109	.88
Mono-nitrator operators	211	1.10
Processing—Continued		
TNT and DNT area—Continued.		
Sweat-house operators, DNT	36	$0.96
Wash-house men	273	1.03
Inspection and testing		
Routine testers, laboratory:		
Male	25	.91
Female	227	.79
Technicians:		
Male	31	1.03
Female	23	.90
Packing		
Packers, DNT and TNT	397	.93
Powerhouse		
Coal handlers	39	.78
Coal pulverizer operators	10	1.00
Engineers, stationary	28	1.35
Firemen, stationary boiler	33	1.07
Generator-switchboard operators	26	1.18
Water tenders	13	1.03
Recording and control		
Magazine keepers	27	1.04
Stock clerks	52	.94
Stock men	21	.89
Timekeepers, male	19	.97
Timekeepers, female	4	.73
Tool clerks	8	.77
Material movement		
Brakemen, yard	68	1.09
Conductors, yard	46	1.19
Engineers, locomotive	76	1.18
Loaders and unloaders	440	.77
Truck drivers	211	.92
Truckers, hand	30	.84
Custodial		
Change-house men	16	.66
Firemen, plant protection	112	.86
Guards, male	468	.84
Guards, female	31	.72
Janitors	173	.67
Janitresses	24	.61

BLACK-POWDER BRANCH

Occupation	Number of workers	Average hourly earnings
Maintenance		
Carpenters, class A	13	$1.23
Carpenters, class B	5	.91
Electricians, class A	3	1.07
Machinists, class A	4	1.32
Mechanics, maintenance, class A	5	1.15
Mechanics, maintenance, class B	7	.95
Supervision		
Working foremen, processing departments	7	1.12
Processing		
Powder making:		
Dry-house operators, soda	9	$0.93
Mixer operators, black-powder	4	.92
Pulverizer operators	15	1.01
Wheel-mill operators	36	1.11
Wheel-mill helpers	9	.87
Grain line:		
Dry-house operators	5	.88
Glazing operators	18	1.11
Glazing helpers	5	.84
Graining operators	16	1.06

Straight-Time Average Hourly Earnings of Workers in Selected Occupations of the Explosives Industry, June 1944—Continued

BLACK-POWDER BRANCH—Continued

Occupation	Number of workers	Average hourly earnings
Processing—Continued		
Grain line—Continued.		
Hydraulic press operators	30	$1.15
Screen and pack operators, black-powder	16	1.03
Screen and pack helpers, black-powder	8	.97
Pellet line:		
Blackstick-crimp operators	4	.90
Dry-house operators	7	1.04
Packers, pellet	23	.99
Pellet-press operators	29	1.04
Pellet-press helpers	10	.92
Pellet wrappers, hand	4	1.09
Pellet wrappers, machine	17	.99
Screen operators	11	1.04
Inspection and testing		
Routine testers, laboratory	3	1.10
Powerhouse		
Engineers, stationary	10	$0.97
Firemen, stationary boiler	21	.91
Recording and control		
Magazine keepers	6	1.11
Material movement		
Loaders and unloaders	11	.83
Truck drivers	17	.86
Truckers, hand	7	.92
Truckers, power	4	.90
Custodial		
Guards	15	.87
Watchmen	17	.76

DYNAMITE BRANCH

Occupation	Number of workers	Average hourly earnings
Maintenance		
Blacksmiths	9	$1.19
Carpenters, class A	71	1.33
Carpenters, class B	29	1.13
Electricians, class A	25	1.31
Electricians, class B	8	1.13
Helpers, journeymen	57	.99
Lead burners	15	1.32
Machinists, class A	40	1.35
Machinists, class B	9	1.11
Mechanics, automotive	16	1.28
Mechanics, maintenance, class A	35	1.26
Mechanics, maintenance, class B	34	1.05
Millwrights, class A	17	1.46
Painters	26	1.17
Pipefitters, class A	39	1.40
Pipefitters, class B	16	1.12
Scale repairmen	3	1.39
Welders, hand	11	1.36
Supervision		
Working foremen, processing departments	143	1.25
Processing		
Acid area:		
Acid-recovery operators	22	1.05
Ammonia-oxidation operators	40	1.27
Helpers, acid area	47	.90
Mixed-acid operators	16	1.26
Nitrate of ammonia operators	85	1.15
Nitric-acid concentrator operators	24	1.28
Nitric-house operators	14	1.26
Pumpmen	6	1.07
Sulphuric-acid concentrator operators	14	1.15
Sulphuric-acid operators	19	1.23
Nitroglycerin line:		
Nitroglycerin helpers	15	.93
Nitroglycerin-neutralizer operators	27	1.19
Nitroglycerin-nitrator operators	32	1.23
Nitroglycerin-separator operators	28	1.23
Dope house:		
Dope-dryer operators	26	1.04
Dope dry-house operators	37	1.07
Dope-grinder operators	18	1.05
Dope-house helpers	44	.88
Dope mixers	24	1.15
Processing—Continued		
Shell house:		
Shell dippers	14	$1.02
Shell-house operators	35	1.08
Shell-house helpers, male	46	.89
Shell-house helpers, female	39	.81
Shell rollers, hand, male	8	.95
Shell rollers, hand, female	36	.79
Powder line:		
Dynamite loaders, hand	38	1.00
Dynamite loaders, machine	175	1.18
Dynamite loaders, helpers, male	118	.96
Dynamite loaders, helpers, female	11	.94
Dynamite mixers	93	1.15
Dynamite mixers, helpers, male	43	.98
Dynamite mixers, helpers, female	7	.87
Inspection and testing		
Routine testers, laboratory, female	14	.80
Technicians	10	1.13
Packing		
Packers, dynamite, male	197	1.02
Packers, dynamite, female	74	1.00
Powerhouse		
Coal handlers	5	.80
Engineers, stationary	58	1.22
Firemen, stationary boiler	67	.98
Recording and control		
Magazine keepers	29	1.06
Stock clerks	3	.93
Material movement		
Brakemen, yard	17	1.03
Engineers, locomotive	44	1.11
Loaders and unloaders	88	.99
Truck drivers	62	.97
Truckers, hand	99	.96
Truckers, power	16	.92
Custodial		
Change-house men	13	.99
Guards	178	1.01
Janitors	36	.99
Janitresses	10	.84
Watchmen	56	.76

millwrights earned $1.46 an hour, the highest average shown for any occupation. Nearly two-thirds of the workers studied were employed in occupations whose earnings ranged from 95 cents to $1.20 an hour. A fifth of the workers were employed in the 10 occupations having earnings within the range of from 95 cents to $1.00 an hour, and another fifth were concentrated in the 6 occupations with earnings averaging from $1.00 to $1.05 an hour. Well over a fifth of all the workers were classified in occupational groups with average hourly earnings in excess of $1.20 an hour.

In the maintenance department, class A carpenters constituted the largest occupational group, and were paid, on the average, $1.33 an hour. Class A machinists, maintenance mechanics, and pipefitters had respective average earnings of $1.35, $1.26, and $1.40 an hour. Journeymen's helpers earned an average of 99 cents an hour.

In general, the highest earnings among the processing departments were paid to workers in the acid area and the nitroglycerin line. With the exception of helpers, acid-recovery operators received the lowest average rate ($1.05 an hour). Nitrate of ammonia operators, the largest occupational group in the acid area, averaged $1.15 an hour. Dope dry-house operators and shell-house operators had respective averages of $1.07 and $1.08 an hour. Machine dynamite loaders, accounting for the largest number of workers in the processing departments, earned $1.18 an hour. Working foremen averaged $1.25.

The occupation of dynamite packer included both men and women, and accounted for a large number of workers. The average for men amounted to $1.02, and that for women to $1.00, an hour.

The average hourly earnings for material-movement employees ranged from 92 cents for power truckers to $1.11 for locomotive engineers. Among the custodial jobs, the guards, who earned an hourly average of $1.01, formed the largest group of workers. Janitors averaged 99 cents and watchmen 76 cents an hour.

Union Wages and Hours in the Printing Trades, July 1, 1944

Summary

ON July 1, 1944, wage rates for union members in the printing trades averaged $1.337 per hour, according to a survey made by the Bureau of Labor Statistics in 75 cities. Book and job workers averaged $1.251, day-shift newspaper workers $1.429, and night workers on newspapers $1.574; the day and night combined average for newspaper workers was $1.505. Almost three-fifths of the union members had rates between $1.20 and $1.60, book and job workers generally having scales lower than newspaper workers. Between July 1, 1943, and July 1, 1944, book and job members received wage increases averaging 2.6 percent, and newspaper workers 2.2 percent. About half of the union members shared in these increases.

Straight-time weekly hours remained unchanged during the period July 1, 1943, to July 1, 1944. Book and job workers averaged 39.7 straight-time hours per week, newspaper workers 37.5. Practically all of the union members received time and a half as an initial overtime rate if required to work beyond the hours specified in the union agreement. Annual vacations with pay were provided in agreements covering 60 percent of the book and job workers and 86 percent of the newspaper workers. Book and job workers generally received 1 week of vacation after 1 year of service, as compared with 2 weeks for newspaper workers after 1 year of service.

Scope and Method of Study

This study is one of a series of annual surveys of union scales in the printing trades which have been made since 1907. The original studies covered 39 cities and included 7 book and job and 4 newspaper occupations. The studies have been gradually extended and now cover 11 book and job and 8 newspaper occupations in 75 cities in 40 States and the District of Columbia.[1]

The information was collected by field representatives of the Bureau, directly from officials of the local printing-trades unions whose rates were included in the study. Scales collected were those in effect on July 1, 1944. Scales in negotiation or before the National War Labor Board at the time the Bureau's representatives called were checked further before the data were tabulated, and, where possible, increases retroactive to July 1 were included in the study. The 1944 survey included 2,568 quotations of scales, covering 61,917 book and job members, and 31,539 newspaper members.

Scales for apprentices, supervisory foremen, and union members employed in Government printing plants, where rates are not established by union agreements, are not included in this report.

For the purposes of this survey, rates quoted were weighted by the number of union members usually employed at each rate. The averages therefore reflect not only the actual rates provided in the union agreements, but also the number of people benefiting from

[1] Footnote on p. 619.

these rates. However, because the weighting factor (membership) may fluctuate from year to year, the averages do not accurately reflect year-to-year changes. For example, if the membership should increase greatly one year in cities or classifications having lower-than-average rates it would tend to lower the average even though actual rates might have increased. For this reason index numbers have been computed to eliminate the effects of fluctuating memberships at the various rates, and these should be used when comparing wages from year to year.[2] The current averages, however, best serve for comparison of the general level of wage rates between trades or between cities and regions at the time the survey was made.

Trend of Union Wage Rates, 1907 to 1944

Average union wage rates for all printing-trades workers in 75 cities rose 2.5 percent during the period July 1, 1943, to July 1, 1944 (table 1). A 2.6-percent increase for book and job workers raised the index for that branch to 112.2 (1939=100); the newspaper increase (2.2 percent) advanced the index for that branch to 115.1.

Although the average rates for newspaper workers have always been higher than those for book and job workers, the trend in the two branches has been similar except for the period from 1917 to 1921 when they rose 96 percent for book and job and 68 percent for newspaper workers. There was a gradual increase in both branches during the next 10 years. In 1932 there was a slight reduction and in 1933 average wages in both branches dropped substantially. Following 1934, wages in the industry resumed their upward trend, which continued through 1944. Although the upward movement

[1] The following are the cities covered. The numerals indicate the population group in which the city is included in tables 5 and 6.

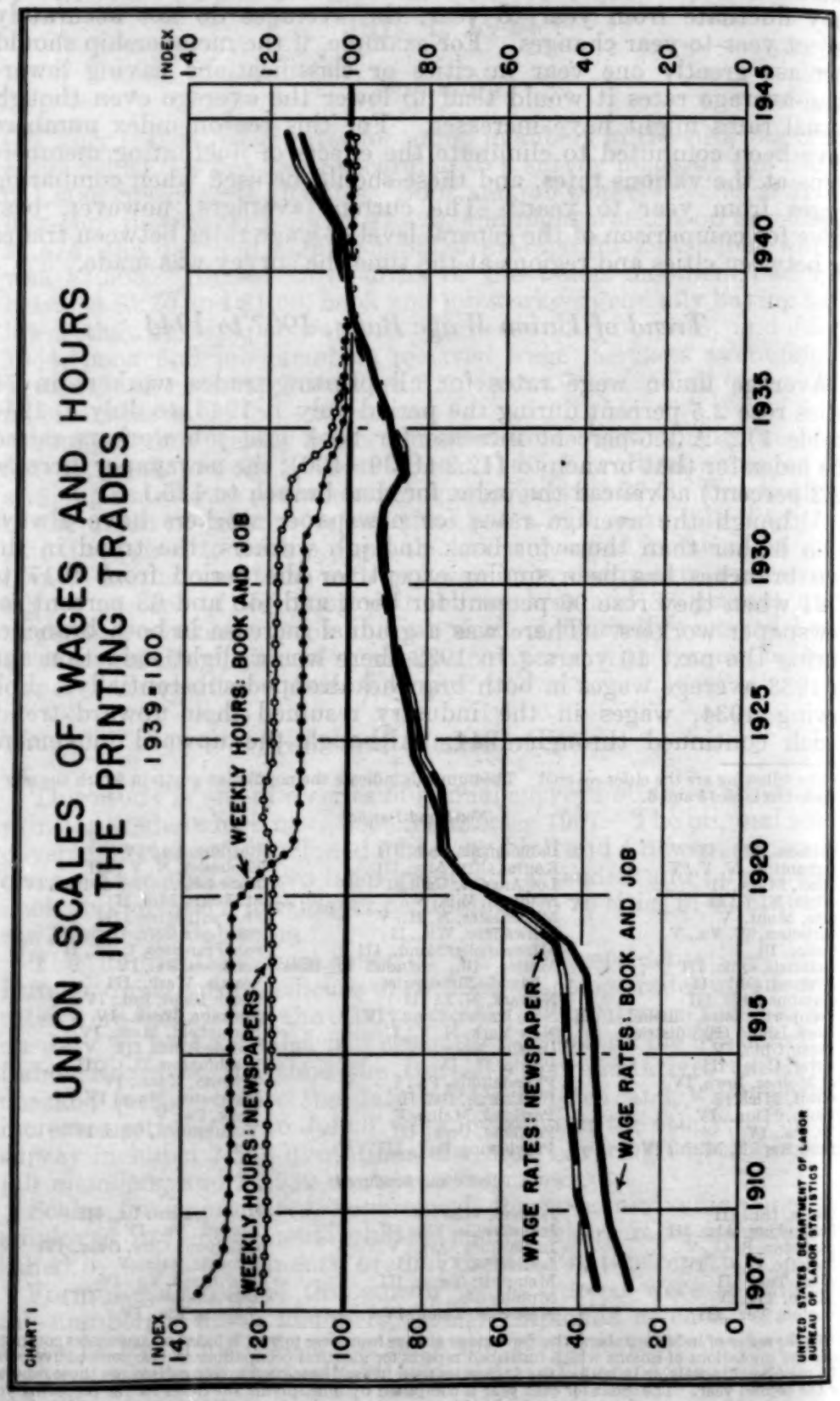
North and Pacific

Baltimore, Md., II
Binghamton, N. Y., V
Boston, Mass., II
Buffalo, N. Y., II
Butte, Mont., V
Charleston, W. Va., V
Chicago, Ill., I
Cincinnati, Ohio, III
Cleveland, Ohio, II
Columbus Ohio, III
Davenport, Iowa, included in Rock Island (Ill.) district
Dayton Ohio, IV
Denver, Colo., III
Des Moines, Iowa, IV
Detroit, Mich., I
Duluth, Minn., IV
Erie, Pa., IV
Grand Rapids, Mich., IV
Indianapolis, Ind., III
Kansas City, Mo., III
Los Angeles, Calif., I
Madison, Wis., V
Manchester, N. H., V
Milwaukee, Wis., II
Minneapolis, Minn., III
Moline, Ill., included in Rock Island (Ill.) district
Newark, N. J., III
New Haven, Conn., IV
New York, N. Y., I
Omaha, Nebr., IV
Peoria, Ill., IV
Philadelphia, Pa., I
Pittsburgh, Pa., II
Portland, Maine, V
Portland, Oreg., III
Providence, R. I., III
Reading, Pa., IV
Rochester, N. Y., III
Rock Island (Ill.) district, IV
St. Louis, Mo., II
St. Paul, Minn., III
Salt Lake City, Utah, IV
San Francisco, Calif., II
Scranton, Pa., IV
Seattle, Wash., III
South Bend, Ind., IV
Spokane, Wash., IV
Springfield, Mass., IV
Toledo, Ohio, III
Washington, D. C., II
Wichita, Kans., IV
Worcester, Mass., IV
York, Pa., V
Youngstown, Ohio, IV

South and Southwest

Atlanta, Ga., III
Birmingham, Ala., III
Charleston, S. C., V
Charlotte, N. C., IV
Dallas, Tex., III
El Paso, Tex., V
Houston, Tex., III
Jackson, Miss., V
Jacksonville, Fla., IV
Little Rock, Ark., V
Louisville, Ky., III
Memphis, Tenn., III
Mobile, Ala., V
Nashville, Tenn., IV
New Orleans, La., III
Norfolk, Va., IV
Oklahoma City, Okla., IV
Phoenix, Ariz., V
Richmond, Va., IV
San Antonio, Tex., III
Tampa, Fla., IV

[2] In the series of index numbers, the percentage change from year to year is based on aggregates computed from the quotations of unions which furnished reports for identical occupations in two consecutive years. The membership weights in both of the aggregates used in each year-to-year comparison are those reported for the second year. The index for each year is computed by multiplying the index for the preceding year by the ratio of the aggregates so obtained. In this report the base has been shifted from 1929 to 1939, and the index figures for each year have been adjusted accordingly.


UNION SCALES OF WAGES AND HOURS
IN THE PRINTING TRADES
1939=100
INDEX
140
120
100
80
60
40
20
0
1907
1910
1915
1920
1925
1930
1935
1940
1945
WEEKLY HOURS: BOOK AND JOB
WEEKLY HOURS: NEWSPAPERS
WAGE RATES: NEWSPAPER
WAGE RATES: BOOK AND JOB
CHART 1
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

has been accelerated during the present war, it has been relatively slight as compared with the increases during and immediately following the first World War.

TABLE 1.—*Indexes of Union Hourly Wage Rates in all Printing Trades, 1907–44*

Year	Indexes (1939=100) of hourly wage rates			Year	Indexes (1939=100) of hourly wage rates		
	All printing	Book and job	Newspaper		All printing	Book and job	Newspaper
1907	(1)	27.0	35.3	1926	84.5	85.4	83.8
1908	(1)	29.9	37.2	1927	87.0	87.5	86.3
1909	(1)	32.1	38.8	1928	88.6	88.7	88.5
1910	(1)	33.8	40.1	1929	89.9	89.9	90.0
1911	36.0	34.7	40.7	1930	91.3	91.5	90.9
1912	36.6	35.3	41.4	1931	91.8	92.1	91.2
1913	37.3	36.0	42.3	1932	91.1	91.2	91.0
1914	38.0	36.8	42.7	1933	85.7	86.1	85.1
1915	38.2	36.9	43.0	1934	87.5	88.5	86.2
1916	38.6	37.5	43.2	1935	90.8	90.4	91.5
1917	39.9	38.8	44.3	1936	92.9	93.0	92.8
1918	43.4	43.0	46.4	1937	96.0	96.0	96.3
1919	53.1	53.0	56.0	1938	99.1	99.2	98.8
1920	68.1	69.1	68.5	1939	100.0	100.0	100.0
1921	74.6	76.1	74.5	1940	101.4	100.9	102.2
1922	75.4	76.4	75.2	1941	102.6	102.0	103.6
1923	77.7	79.4	76.0	1942	107.0	106.4	108.1
1924	81.5	82.7	80.6	1943	110.4	109.3	112.6
1925	82.7	83.5	82.0	1944	113.1	112.2	115.1

[1] Combined data for the years 1907–10 not available.

Union Wage Rates in 1944

Union wage rates for all printing-trades workers in 75 cities averaged $1.337 per hour on July 1, 1944, with the average for newspaper workers ($1.505) exceeding that for book and job ($1.251). Because of established differentials for night work in newspaper printing, night workers averaged $1.574, almost 15 cents per hour higher than day workers who received an average of $1.429 (table 2). Night rates for book and job workers were not included in the study as there are ordinarily not enough members regularly employed on night shifts to make special computations significant.

Almost three-fifths of all the members had rates between $1.20 and $1.60. However, almost a third of the book and job members had rates below $1.20 and less than 10 percent had rates above $1.60. In the newspaper trades, on the other hand, only 7 percent of the members had rates below $1.20 and a third had rates exceeding $1.60. Over three-fifths of the night newspaper workers and more than a third of the day workers received at least $1.50 per hour.

Among the individual book and job trades, photoengravers had the highest average ($1.708)—well above that of the electrotypers ($1.574), who were second. Bindery women had the lowest average ($0.647). A majority of these bindery women earned between 60 and 70 cents per hour; more than a fourth received less than 60 cents, and only 1 percent had rates as high as 80 cents per hour. The machinists and photoengravers had no rates lower than $1.10. The mailers and press assistants and feeders had none as high as $1.50. Almost all of the photoengravers received at least $1.50 and a fourth received at least $1.90 per hour. The highest occupational rate in the book and

TABLE 2.—*Percentage Distribution of Union Members in the Printing Trades, by Hourly Rates, July 1, 1944*

Trade	Average rate per hour	Percent of union members whose rates (in cents) per hour were—							
		40 and under 50	50 and under 60	60 and under 70	70 and under 80	80 and under 90	90 and under 100	100 and under 110	110 and under 120
All printing trades	$1.337	0.2	2.3	5.7	1.7	1.1	1.9	3.7	6.9
Book and job	1.251	.4	3.5	8.6	2.6	1.6	2.4	4.9	8.0
Bindery women	.647	2.5	24.7	56.4	15.4	.6	.....	.4	.....
Bookbinders	1.215	.....	.....	3.1	(1)	.5	1.8	6.7	23.8
Compositors, hand	1.380	.....	.....	.....	.....	.1	.2	1.2	9.3
Electrotypers	1.574	.....	.....	.....	.....	.....	.1	(1)	1.6
Machine operators	1.410	.....	.....	.....	.....	.1	.3	.6	6.2
Machine tenders (machinists)	1.410	.....	.....	.....	.....	.....	.....	.....	7.5
Mailers	1.205	.....	.....	.....	1.3	.....	3.4	14.2	12.3
Photoengravers	1.708	.....	.....	.....	.....	.....	.....	.....	.1
Press assistants and feeders	1.082	(1)	.4	3.3	3.2	10.4	14.1	22.0	3.1
Pressmen, cylinder	1.381	.....	.....	.....	.....	.1	.5	3.3	7.8
Pressmen, platen	1.180	.....	.....	.1	1.1	4.0	9.3	11.8	25.8
Newspaper	1.505	.....	(1)	.....	.1	.2	.8	1.4	4.9
Day work	1.429	.....	(1)	.....	.1	.5	1.2	1.8	8.2
Night work	1.574	.....	.....	.....	(1)	(1)	.5	1.0	2.0
Compositors, hand	1.574	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.502	.....	.....	.....	.1	.....	.....	.1	2.4
Night work	1.633	.....	.....	.....	.....	.....	.....	.....	.....
Machine operators	1.555	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.483	.....	.....	.....	.1	.....	.....	.1	2.8
Night work	1.617	.....	.....	.....	.....	.....	.....	.....	.....
Machine tenders (machinists)	1.566	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.512	.....	.....	.....	.....	.....	.....	.....	1.3
Night work	1.619	.....	.....	.....	.....	.....	.....	.....	.....
Mailers	1.203	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.118	.....	.5	.....	1.2	3.9	11.2	11.6	49.9
Night work	1.255	.....	.....	.....	.3	.1	3.2	5.8	8.0
Photoengravers	1.788	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.681	.....	.....	.....	.....	.....	.....	.....	.9
Night work	1.888	.....	.....	.....	.....	.....	.....	.....	.3
Pressmen (journeymen)	1.469	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.372	.....	.....	.....	.....	.5	.....	1.3	5.8
Night work	1.571	.....	.....	.....	.....	.....	.2	.5	3.0
Pressmen-in-charge	1.605	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.501	.....	.....	.....	.....	.....	.4	.....	.4
Night work	1.720	.....	.....	.....	.....	.....	.....	.2	.4
Stereotypers	1.460	.....	.....	.....	.....	.....	.....	.....	.....
Day work	1.378	.....	.....	.....	.....	.....	.....	3.3	5.8
Night work	1.570	.....	.....	.....	.....	.....	.....	1.4	3.2

job branch ($2.086) was paid to gravure workers in New York City. The lowest (40 cents) to platen-press feeders in San Antonio.

Photoengravers also had the highest average in the newspaper branch ($1.788); day workers averaged $1.681, and night workers $1.88. Pressmen-in-charge had the next highest average ($1.605), and mailers the lowest ($1.203). The only newspaper trade that had as many as 1 percent of its members earning less than $1 per hour was that of mailers. Over a fourth of the day mailers earned less than $1.10 and none earned as much as $1.50. Over three-fourths of the night mailers earned between $1.20 and $1.40, and less than 1 percent earned as much as $1.50. In contrast, practically all of the photoengravers earned at least $1.50, about half of those on day work received at least $1.70, and over three-fourths of those on night work earned $1.80 or more. About one-fourth had rates as high as $2.00 per hour.

TABLE 2.—*Percentage Distribution of Union Members in the Printing Trades, by Hourly Rates, July 1, 1944*—Continued

Trade	Percent of union members whose rates (in cents) per hour were—								
	120 and under 130	130 and under 140	140 and under 150	150 and under 160	160 and under 170	170 and under 180	180 and under 190	190 and under 200	200 and over
All printing trades	18.0	13.5	10.7	16.6	5.9	4.1	5.1	1.9	0.7
Book and job	20.9	13.0	7.5	17.4	3.6	2.1	1.2	1.8	.5
Bindery women									
Bookbinders	37.4	19.5	6.6	.6	(1)				
Compositors, hand	25.6	16.9	10.8	35.9					
Electrotypers	10.3	17.4	12.9	3.0	9.4	26.7	18.6		
Machine operators	16.5	18.5	7.2	50.1			.1		.4
Machine tenders (machinists)	25.0	12.8	17.2	27.8	9.7				
Mailers	64.0	3.8	1.0						
Photoengravers	.4	3.3	10.6	16.4	29.4	7.7	5.1	21.9	5.1
Press assistants and feeders	35.4	7.8	.3						
Pressmen, cylinder	23.2	17.1	15.0	25.2	4.9	2.7	.2	(1)	
Pressmen, platen	15.3	27.4	4.9	.3					
Newspaper	12.3	14.4	16.9	14.9	10.4	7.8	12.6	2.1	1.2
Day work	13.7	18.7	19.8	13.4	10.5	10.1	1.7	.2	.1
Night work	11.0	10.6	14.3	16.2	10.3	5.8	22.3	3.8	2.2
Compositors, hand									
Day work	10.6	12.7	24.5	17.0	14.1	18.3			.2
Night work	2.2	8.5	13.9	18.0	16.2	7.5	33.6		.1
Machine operators									
Day work	12.7	13.3	23.5	20.5	12.3	14.5			.2
Night work	3.3	10.0	11.5	19.3	18.4	6.9	30.5		.1
Machine tenders (machinists)									
Day work	8.8	11.2	21.8	25.5	16.8	14.6			
Night work	1.8	15.7	10.0	17.0	19.3	13.9	22.3		
Mailers									
Day work	20.9	.7	.1						
Night work	57.1	20.7	4.3	.5					
Photoengravers									
Day work	1.3	2.8	7.0	20.5	17.9	24.7	24.0	.9	
Night work		3.1	1.6	2.6	8.0	8.6	31.6	19.8	24.4
Pressmen (journeymen)									
Day work	22.1	34.1	18.7	1.9	12.6	2.7	.3		
Night work	3.3	6.1	30.1	24.2	2.6	.1	23.3	6.0	.6
Pressmen-in-charge									
Day work	6.3	19.9	34.0	18.4	4.8	2.8	9.3	3.3	.4
Night work	.6	4.3	10.1	28.9	2.9	25.1	.6	2.9	24.0
Stereotypers									
Day work	9.8	41.6	22.3	15.8	1.4				
Night work	6.5	15.8	21.3	16.7	2.3	8.4	.8	23.2	.4

[1] Less than a tenth of 1 percent.

A majority of the night workers in each of the other trades, the day-shift machine tenders, and about half of the day compositors and machine operators earned at least $1.50 per hour; about a quarter of the night pressmen-in-charge received $2.00 or more. A majority of the day-shift pressmen, pressmen-in-charge, and stereotypers earned between $1.30 and $1.50 per hour. The highest rate in this branch ($2.315) was received by color gravure pressmen-in-charge on the night shift in New York City. The lowest ($0.588 per hour) was quoted for day-shift mailers in Portland, Maine.

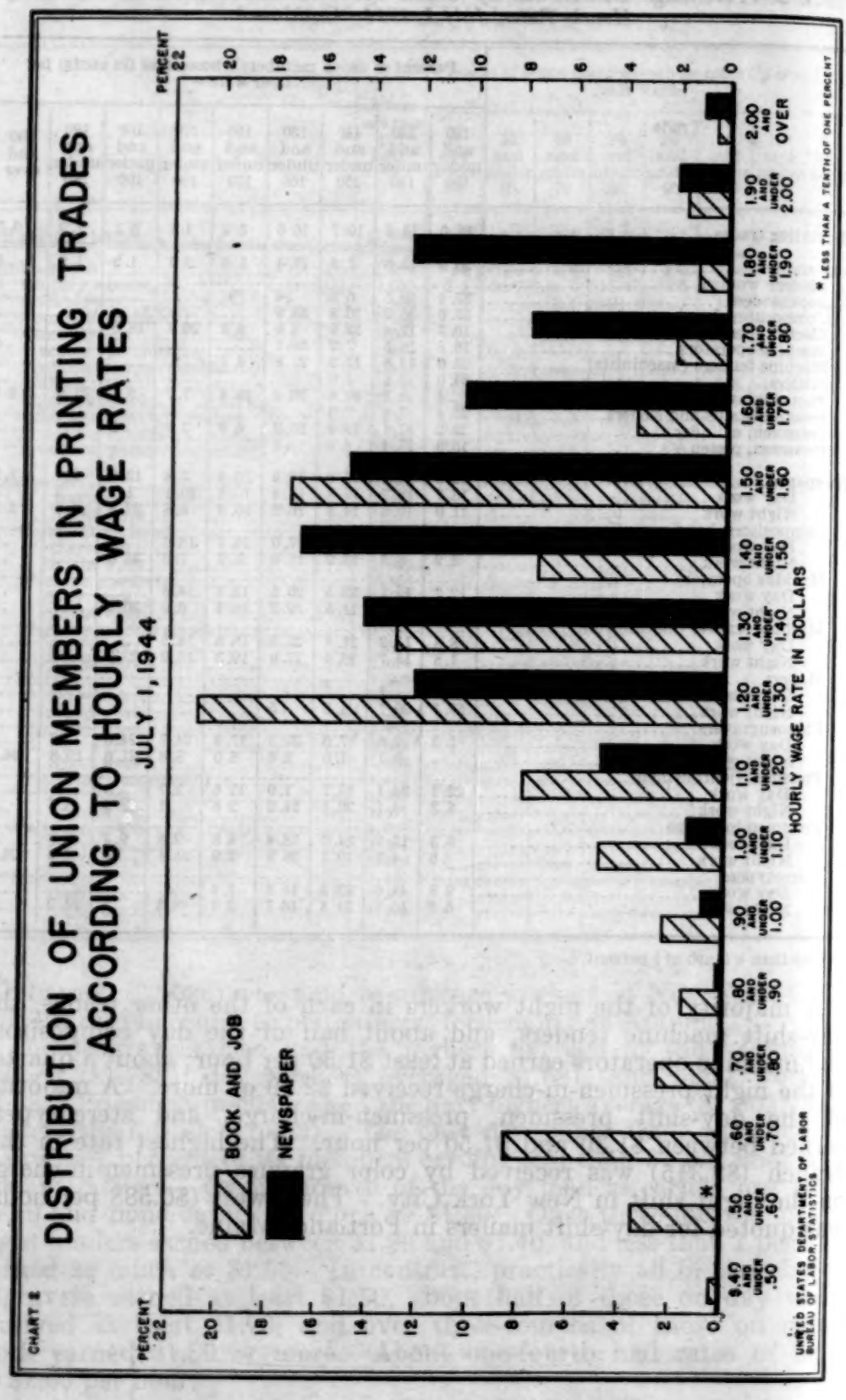


CHART 2
DISTRIBUTION OF UNION MEMBERS IN PRINTING TRADES ACCORDING TO HOURLY WAGE RATES
JULY 1, 1944
BOOK AND JOB
NEWSPAPER
PERCENT
22
20
18
16
14
12
10
8
6
4
2
0
$.40 AND UNDER .50
.50 AND UNDER .60
.60 AND UNDER .70
.70 AND UNDER .80
.80 AND UNDER .90
.90 AND UNDER 1.00
1.00 AND UNDER 1.10
1.10 AND UNDER 1.20
1.20 AND UNDER 1.30
1.30 AND UNDER 1.40
1.40 AND UNDER 1.50
1.50 AND UNDER 1.60
1.60 AND UNDER 1.70
1.70 AND UNDER 1.80
1.80 AND UNDER 1.90
1.90 AND UNDER 2.00
2.00 AND OVER
HOURLY WAGE RATE IN DOLLARS
* LESS THAN A TENTH OF ONE PERCENT
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Changes in Union Wage Rates Between 1943 and 1944

More than half of the quotations, including about the same proportion of union members, provided for increases in wages during the period July 1, 1943, to July 1, 1944 (table 3). Slightly less than half of the book and job members and more than half of the newspaper workers were in this group. A larger proportion of the day newspaper workers than night workers benefited by increases.

TABLE 3.—*Extent of Changes in Union Wage Rates and Percent of Members Affected by Increases, July 1, 1943, to July 1, 1944*

Trade	Number of comparable quotations	Quotations showing increases		Union members receiving increases				
		Number	Percent	Percent of total	Percent receiving increases of—			
					Under 5 percent	5 and under 10 percent	10 and under 15 percent	15 percent and over
All printing trades	2,527	1,351	53.5	52.0	28.0	20.2	2.9	0.9
Book and job	1,400	634	45.3	49.4	21.9	21.9	4.3	1.3
Bindery women	91	42	46.2	52.3	7.1	9.3	27.8	8.1
Bookbinders	156	57	36.5	30.8	17.9	11.8	.9	.2
Compositors, hand	94	48	51.1	56.1	14.4	41.3	.1	.3
Electrotypers	60	34	56.7	60.5	44.4	14.2	1.9	-------
Machine operators	109	57	52.3	32.2	10.4	21.3	.2	.3
Machine tenders (machinists)	41	20	48.8	39.8	8.1	31.7	-------	-------
Mailers	36	18	50.0	82.3	73.7	8.6	-------	-------
Photoengravers	67	40	59.7	84.7	29.4	54.9	.4	-------
Press assistants and feeders	229	91	39.7	48.7	31.9	16.1	.5	.2
Pressmen, cylinder	378	164	43.4	41.7	33.0	8.2	.5	-------
Pressmen, platen	139	63	45.3	49.4	33.2	15.7	.5	-------
Newspaper	1,127	717	63.6	57.2	40.2	16.8	.2	(1)
Day work	599	377	62.9	62.9	43.4	19.1	.4	(1)
Night work	528	340	64.4	52.1	37.2	14.8	.1	(1)
Compositors, hand:								
Day work	82	56	68.3	61.4	46.3	14.8	.3	-------
Night work	73	49	67.1	47.7	31.5	16.2	-------	-------
Machine operators:								
Day work	87	60	69.0	69.0	48.5	20.1	.4	-------
Night work	78	53	67.9	52.8	32.9	19.9	-------	-------
Machine tenders (machinists):								
Day work	65	42	64.6	63.1	42.7	19.3	1.1	-------
Night work	61	40	65.6	54.5	31.9	22.3	.3	-------
Mailers:								
Day work	60	34	56.7	50.4	34.7	14.1	1.3	.3
Night work	54	30	55.6	35.5	29.5	5.9	-------	.1
Photoengravers:								
Day work	56	36	64.3	53.4	22.5	30.8	.1	-------
Night work	51	34	66.7	65.3	39.5	25.8	-------	-------
Pressmen (journeymen):								
Day work	92	54	58.7	63.4	49.6	13.8	(1)	-------
Night work	77	49	63.6	63.6	58.9	4.7	(1)	-------
Pressmen-in-charge:								
Day work	78	47	60.3	56.4	45.3	9.0	2.1	-------
Night work	63	38	60.3	60.5	54.6	4.3	1.6	-------
Stereotypers:								
Day work	79	48	60.8	70.2	32.0	38.2	-------	-------
Night work	71	47	66.2	59.2	30.9	28.2	.1	-------

[1] Less than a tenth of 1 percent.

Photoengravers, who had the highest average rate, also had the largest percentage of quotations (59.7) and the largest percentage of members (84.7) covered by increases. The mailers followed close behind, 82.3 percent receiving increases. The bindery women, hand compositors, and electrotypers all had a majority of their members covered by raises. The bookbinders had the smallest percentage of quotations (36.5 percent) providing increases as well as the smallest percentage of members covered by increases (30.8 percent).

A substantial majority (about two-thirds in most cases) of the quotations for each of the individual newspaper trades provided for increases. These increases covered a majority of the members in each group except night-shift hand compositors and mailers. Of the latter, 35.5 percent received increases.

Most of the reported increases amounted to less than 10 percent but a few members received increases of 15 percent or more. Almost 90 percent of those book and job workers who obtained raises received increases of less than 10 percent—exactly half of these received less than 5 percent. Most of the increases in the newspaper trades (70 percent) provided for raises of less than 5 percent.

In the book and job branch a majority of those receiving increases in each of the typographical trades (hand compositors, machine operators, machinists) and the photoengravers, received between 5 and 10 percent. Only the bindery women, whose scales are relatively low, had a large number of members (two-thirds of those with increases) earning more than 10 percent above 1943 scales, 15 percent having increases of at least 15 percent. The majority of the members in the other trades received less than 5 percent. The greatest recorded increase was for bindery women in San Antonio (35 percent). The rates there were raised from 40 to 54 cents per hour. Hardly any of the newspaper workers received increases as high as 10 percent. Scales for day mailers in Wichita showed the greatest increase in this branch during the year—19 percent, from 67.5 to 80 cents per hour.

Night-Rate Differentials in Newspaper Trades

Although hourly rates for journeymen in newspaper printing trades are substantially higher for night work than for day work, these higher rates do not always bring more income to the night workers since the differential is frequently in the form of shorter night hours for the same daily or weekly pay earned by day workers (see table 8). Newspaper workers on night shifts averaged slightly over 11 cents per hour more than those on day shifts on July 1, 1944; a third of these workers averaged between 6 and 8 cents per hour more (table 4).

Pressmen-in-charge had the highest differential in favor of night workers (18.7 cents), and machine operators had the lowest (7.9 cents). Differentials of less than 10 cents per hour covered well over half of the typographical workers (hand compositors, machine operators, and machinists). A majority of the night mailers received

between 14 and 16 cents per hour more than day mailers. About a third of the photoengravers, pressmen, pressmen-in-charge, and stereotypers received a premium of 20 cents or more per hour for night work. Almost a fourth of the photoengravers and stereotypers had night rates 26 cents or more per hour higher than day rates.

The stereotypers were the only newspaper workers with any night-shift premiums as high as 30 cents per hour. The highest differential (45.8 cents per hour) was in Newark, where the rates per day and night were the same but the night shift was only 6 hours and the day shift 8 hours. A 38.6-cent hourly night differential in New York resulted from having the same weekly union scales for a 37½-hour week for day work and a 31½-hour week for night work. In Chicago the differential on foreign language dailies (37.3 cents) was due to a combination of shorter hours and higher shift rates for night work.

TABLE 4.—*Differences in Union Wage Rates for Day and Night Work in Newspaper Printing Trades, July 1, 1944*

Trade	Average difference per hour in wage rate	Percent of night workers whose wage-rate differences (in cents per hour) over day work were—													
		0	Up to 4	4 and under 6	6 and under 8	8 and under 10	10 and under 12	12 and under 14	14 and under 16	16 and under 18	18 and under 20	20 and under 22	22 and under 24	24 and under 26	26 and over
All trades	$0.112	0.3	1.7	8.1	33.3	12.2	11.6	4.8	10.7	4.9	1.4	4.2	1.7	0.7	4.4
Compositors, hand	.080	-----	-----	7.9	53.2	16.3	17.8	1.9	2.9	-----	-----	-----	-----	-----	-----
Machine operators	.079	.2	-----	7.5	57.1	14.6	15.5	2.2	2.9	-----	-----	-----	-----	-----	-----
Machine tenders (machinists)	.088	-----	-----	8.0	35.0	16.3	36.1	1.8	2.8	-----	-----	-----	-----	-----	-----
Mailers	.112	-----	9.1	9.6	7.8	9.7	4.8	1.3	52.3	5.0	-----	-----	-----	.4	-----
Photoengravers	.179	-----	-----	2.4	4.9	.2	4.1	38.4	1.6	16.6	.3	1.2	.5	5.5	24.3
Pressmen (journeymen)	.153	.7	1.0	7.7	6.7	12.0	4.3	8.6	3.3	15.6	4.3	23.4	5.4	-----	7.0
Pressmen-in-charge	.187	1.2	1.7	8.3	6.6	3.1	11.3	1.9	1.4	3.8	20.5	2.6	20.7	9.4	7.5
Stereotypers	.171	.9	2.4	12.6	23.5	5.8	6.0	.3	9.7	6.5	1.9	1.4	2.4	2.1	24.5

Regional Differences in Wage Rates

Average wages in the North and Pacific region were consistently higher than those in the South and Southwest (table 5). In 82 of the 84 possible comparisons [3] of average wage rates between the two regions, the North and Pacific region had higher averages than the South and Southwest region. Differences for all printing-trades workers in favor of the North and Pacific region were 8.9 cents in cities of group III, 9 cents in group IV, and 2 cents in group V. The largest difference in favor of the North and Pacific region was 29.6 cents for night-shift newspaper photoengravers in size III cities.

[3] Comparisons are limited to groups III, IV, and V as there are no cities in the South or Southwest with populations of 500,000 or more.

TABLE 5.—*Average Hourly Union Wage Rates in the Printing Trades, by Region and Population Group, July 1, 1944*

Trade	Average hourly wage rates in the cities of specified population group [1]										
	Group I [2]	Group II [3]	Group III			Group IV			Group V		
	North and Pacific	North and Pacific	All regions	North and Pacific	South and Southwest	All regions	North and Pacific	South and Southwest	All regions	North and Pacific	South and Southwest
All printing trades	$1.427	$1.283	$1.227	$1.247	$1.158	$1.206	$1.226	$1.136	$1.171	$1.178	$1.158
Book and job	1.349	1.162	1.113	1.135	1.017	1.121	1.153	.967	1.081	1.087	1.070
Bindery women	.686	.637	.597	.609	.530	.569	.590	.531	.568	.589	(3)
Bookbinders	1.229	1.222	1.181	1.217	1.039	1.093	1.128	1.012	1.134	1.179	(3)
Compositors, hand	1.492	1.288	1.275	1.301	1.180	1.209	1.225	1.130	1.168	1.170	1.167
Electrotypers	1.738	1.343	1.370	1.377	1.279	1.322	1.345	1.139	(3)	(3)	-------
Machine operators	1.497	1.309	1.286	1.321	1.194	1.205	1.216	1.152	1.191	1.249	1.109
Machine tenders (machinists)	1.540	1.266	1.291	1.302	1.162	-------	1.282	-------	(3)	(3)	(3)
Mailers	1.231	1.172	1.199	1.210	1.050	.953	.971	.919	-------	-------	-------
Photoengravers	1.817	1.595	1.528	1.546	1.408	1.452	1.458	1.435	-------	1.460	-------
Press assistants and feeders	1.167	.992	.926	.964	.691	.956	.977	.717	.794	.804	.753
Pressmen, cylinder	1.508	1.273	1.246	1.287	1.113	1.270	1.285	1.091	1.139	1.139	1.138
Pressmen, platen	1.309	1.150	1.061	1.103	.882	1.008	1.041	.886	.953	.920	1.029
Newspaper	1.624	1.491	1.413	1.455	1.308	1.305	1.324	1.257	1.249	1.265	1.225
Day work	1.551	1.431	1.374	1.412	1.273	1.282	1.297	1.236	1.214	1.227	1.188
Night work	1.666	1.558	1.466	1.516	1.352	1.337	1.367	1.278	1.291	1.325	1.255
Compositors, hand:											
Day work	1.659	1.542	1.438	1.477	1.332	1.314	1.327	1.268	1.241	1.249	1.225
Night work	1.756	1.622	1.515	1.561	1.401	1.382	1.403	1.323	1.306	1.319	1.293
Machine operators:											
Day work	1.627	1.539	1.331	1.486	1.350	1.316	1.331	1.275	1.245	1.257	1.220
Night work	1.764	1.621	1.522	1.559	1.427	1.365	1.393	1.315	1.311	1.330	1.291
Machine tenders (machinists):											
Day work	1.692	1.533	1.448	1.488	1.367	1.341	1.363	1.285	1.239	1.251	1.213
Night work	1.789	1.622	1.520	1.566	1.421	1.375	1.397	1.329	1.306	1.331	1.272
Mailers:											
Day work	1.192	1.110	1.076	1.137	.898	.996	1.019	.937	.825	.811	(3)
Night work	1.292	1.226	1.140	1.222	.990	1.093	1.132	.933	1.189	1.238	(3)
Photoengravers:											
Day work	1.805	1.640	1.529	1.590	1.439	1.439	1.459	1.360	-------	1.252	-------
Night work	2.009	1.822	1.621	1.743	1.447	1.537	1.563	1.462	-------	(3)	-------
Pressmen (journeymen):											
Day work	1.487	1.329	1.307	1.343	1.217	1.217	1.224	1.194	1.195	1.250	1.115
Night work	1.669	1.488	1.395	1.429	1.315	1.255	1.276	1.233	1.236	1.331	1.155
Pressmen-in-charge:											
Day work	1.644	1.457	1.415	1.434	1.359	1.345	1.342	1.354	1.303	1.383	1.143
Night work	1.840	1.622	1.494	1.527	1.427	1.433	1.440	1.399	1.299	1.420	1.178
Stereotypers:											
Day work	1.454	1.425	1.341	1.377	1.266	1.240	1.254	1.200	1.186	1.225	1.117
Night work	1.723	1.579	1.423	1.475	1.327	1.307	1.349	1.232	1.243	1.318	1.172

[1] Group I, over 1,000,000 population; group II, 500,000 to 1,000,000; group III, 250,000 to 500,000; group IV, 100,000 to 250,000; group V, 40,000 to 100,000.
[2] No city of this size in the South or Southwest.
[3] Insufficient quotations to compute an average.

Average Wage Rates and Percent of Change, by City

In table 6 the cities covered are grouped according to size into five population groups and average wage rates as well as the percent of change since July 1, 1943, are shown for each city.

In the book and job branch of the industry, average rates ranged from $1.349 in cities of over 1,000,000 to $1.081 in cities with populations of 40,000 to 100,000 (table 6). The average for cities of 100,000

to 250,000 ($1.121) was slightly higher than the average for cities of 250,000 to 500,000 ($1.113).

Chicago, San Francisco, Columbus, Dayton, and Madison were the cities with highest average rates in their five respective population groups. Cities with the lowest averages in the respective groups were Los Angeles, Milwaukee, San Antonio, Richmond, and Portland, Maine.

In the newspaper branch of the industry the averages ranged by population groups from $1.624 in large cities to $1.249 in the cities of 40,000 to 100,000 population. Cities with the highest averages in the five population groups were New York, Washington, Newark, Youngstown, and Butte. Cities with the lowest averages were Los Angeles, Pittsburgh, New Orleans, Wichita, and Little Rock.

The highest city average found in the entire printing industry was $1.741 for newspaper workers in New York City and the lowest city average was $0.805 for workers in the book and job branch of the industry in Portland, Maine.

In the book and job branch, Grand Rapids had the greatest percentage increase over July 1943 rates (10.7 percent). San Antonio's rates increased 7.4 percent and seven other cities had average rate increases of more than 5 percent. Eleven cities reported no change in scales between July 1, 1943, and July 1, 1944.

Scranton had the highest increase in the newspaper branch (6.6 percent). Washington, New Orleans, Youngstown, New Haven, and Cincinnati all had increases exceeding 5 percent. Only six cities reported no change in scales in the newspaper branch.

These net changes are based on the specific rates for 1943 and 1944 weighted by the membership reported in 1944. Only comparable data for both years are included. Specific increases for 1944 will reflect larger percentage changes in those cities with comparatively low actual scales; thus, if the pressmen in city A change their scale from $1.00 to $1.10, an increase of 10 percent is registered, whereas, if in city B the increase is from $1.40 to $1.50 the percentage change is only about 7 percent. For this reason those cities which had lower scales tend to show greater percentage increases than those which had higher scales.

TABLE 6.—*Average Union Hourly Wage Rates in the Printing Trades, by Cities and Population Groups, July 1, 1944, and Percent of Increase over Previous Year*

BOOK AND JOB

City and population group	Average hourly rate	Percent of increase	City and population group	Average hourly rate	Percent of increase
Group I (over 1,000,000):			Group II—Continued.		
Chicago, Ill	$1.388	4.2	Boston, Mass	$1.121	1.9
New York, N. Y	1.360	1.6	Baltimore, Md	1.107	5.4
Average for group I	*1.349*		Milwaukee, Wis	1.079	2.1
Detroit, Mich	1.296	3.6	Group III (250,000 to 500,000):		
Philadelphia, Pa	1.264	3.8	Columbus, Ohio	1.330	3.2
Los Angeles, Calif	1.178	.9	Seattle, Wash	1.268	1.9
Group II (500,000 to 1,000,000):			Cincinnati, Ohio	1.250	4.6
San Francisco, Calif	1.269	.3	Indianapolis, Ind	1.217	4.4
Cleveland, Ohio	1.264	5.2	Toledo, Ohio	1.213	.4
Buffalo, N. Y	1.170	3.5	Portland, Oreg	1.186	2.4
Pittsburgh, Pa	1.163	4.6	Providence, R. I	1.155	.3
Average for group II	*1.162*		Rochester, N. Y	1.147	3.2
St. Louis, Mo	1.150	.2	Kansas City, Mo	1.140	1.3
Washington, D. C	1.135	2.3	Newark, N. J	1.133	1.9

TABLE 6.—*Average Union Hourly Wage Rates in the Printing Trades, by Cities and Population Groups, July 1, 1944, and Percent of Increase over Previous Year*—Con.

BOOK AND JOB—Continued

City and population group	Average hourly rate	Percent of increase	City and population group	Average hourly rate	Percent of increase
Group III—Continued.			Group IV—Continued.		
Dallas, Tex	$1.133	0.6	Spokane, Wash	$1.092	4.5
Average for group III	*1.115*		Des Moines, Iowa	1.084	5.2
Houston, Tex	1.110	1.9	Grand Rapids, Mich	1.084	10.7
Denver, Colo	1.109	4.2	Tampa, Fla	1.060	0
Louisville, Ky	1.088	1.6	Scranton, Pa	1.057	3.4
New Orleans, La	1.056	3.2	Oklahoma City, Okla	1.041	5.2
Minneapolis, Minn	.997	1.0	Salt Lake City, Utah	1.031	0
Birmingham, Ala	.976	.9	Duluth, Minn	1.022	.7
St. Paul, Minn	.963	1.0	Wichita, Kans	.969	3.4
Atlanta, Ga	.950	.8	Jacksonville, Fla	.965	.8
Memphis, Tenn	.933	0	Nashville, Tenn	.936	4.0
San Antonio, Tex	.928	7.4	Richmond, Va	.886	4.5
Group IV (100,000 to 250,000):			Group V (40,000 to 100,000):		
Dayton, Ohio	1.319	2.0	Madison, Wis	1.292	1.7
Rock Island (Ill.) district [1]	1.250	6.6	Charleston, W. Va	1.219	2.0
Peoria, Ill	1.180	2.7	Phoenix, Ariz	1.219	1.9
Youngstown, Ohio	1.179	5.1	El Paso, Tex	1.211	2.7
Norfolk, Va	1.173	0	Charleston, S. C	1.125	0
Omaha, Nebr	1.172	3.2	Butte, Mont	1.081	0
Erie, Pa	1.146	2.2	*Average for group V*	*1.081*	
New Haven, Conn	1.142	1.9	Mobile, Ala	1.074	0
Charlotte, N. C	1.133	6.6	Binghamton, N. Y	1.034	2.0
Worcester, Mass	1.121	.2	York, Pa	1.021	4.8
Average for group IV	*1.121*		Jackson, Miss	.950	0
Reading, Pa	1.097	4.8	Little Rock, Ark	.935	4.0
Springfield, Mass	1.094	2.9	Manchester, N. H	.913	0
South Bend, Ind	1.093	0	Portland, Maine	.805	0

NEWSPAPER

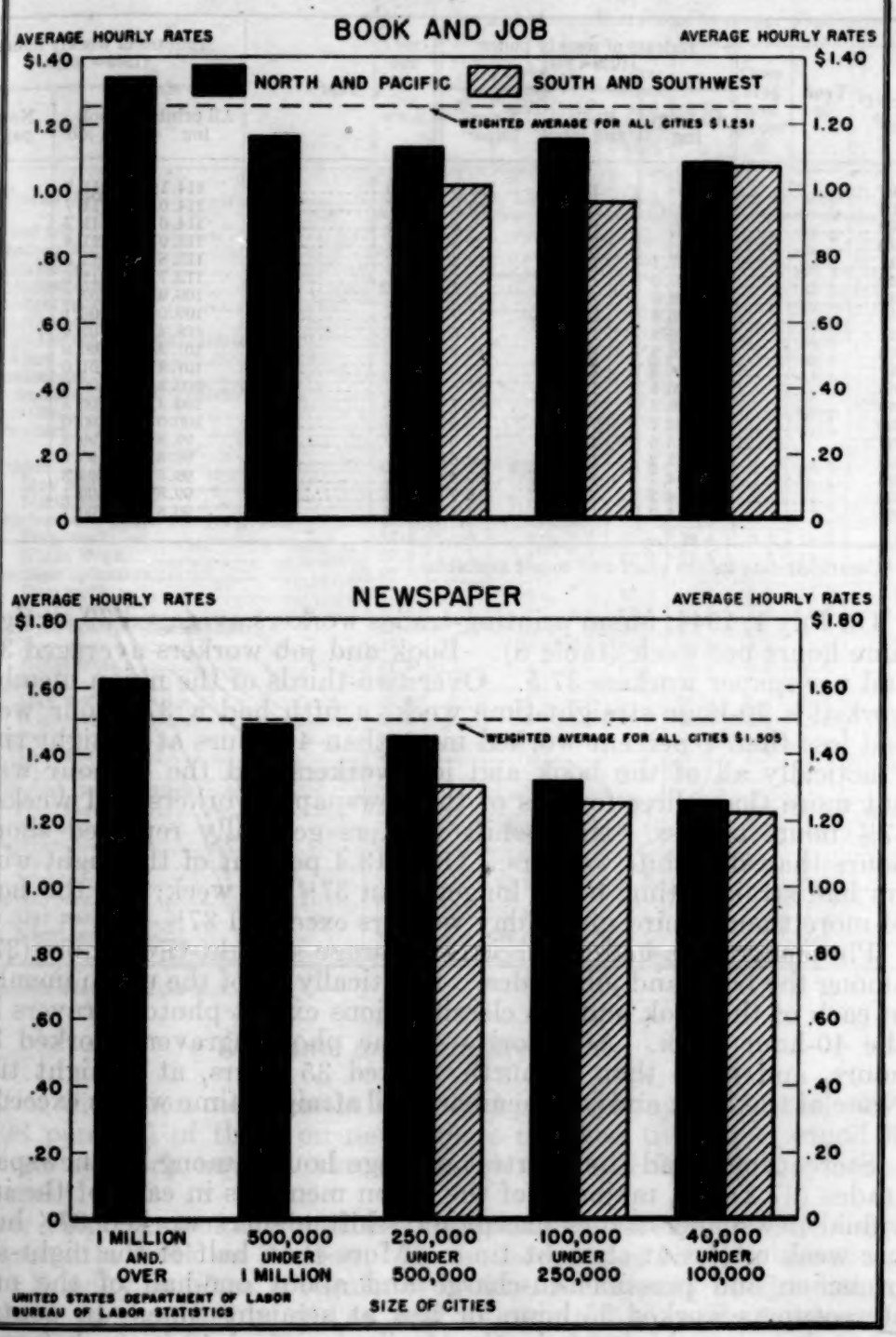
Group I (over 1,000,000):			Group IV (100,000 to 250,000):		
New York, N. Y	$1.741	0.8	Youngstown, Ohio	$1.434	5.5
Average for group I	*1.624*		Dayton, Ohio	1.426	1.5
Chicago, Ill	1.593	1.8	Des Moines, Iowa	1.400	3.8
Detroit, Mich	1.589	1.6	Jacksonville, Fla	1.390	1.4
Philadelphia, Pa	1.427	2.5	Erie, Pa	1.376	3.8
Los Angeles, Calif	1.422	2.6	Scranton, Pa	1.359	6.6
Group II (500,000 to 1,000,000):			Reading, Pa	1.352	3.4
Washington, D. C	1.588	6.4	Rock Island (Ill.) district [1]	1.345	3.4
Boston, Mass	1.556	2.2	Omaha, Nebr	1.342	4.5
Average for group II	*1.491*		Worcester, Mass	1.335	4.0
San Francisco, Calif	1.480	2.3	Peoria, Ill	1.322	4.4
Cleveland, Ohio	1.474	3.9	Salt Lake City, Utah	1.312	3.9
St. Louis, Mo	1.453	3.8	*Average for group IV*	*1.305*	
Milwaukee, Wis	1.449	3.8	Tampa, Fla	1.303	0
Baltimore, Md	1.416	2.6	Duluth, Minn	1.288	4.8
Buffalo, N. Y	1.410	4.1	Richmond, Va	1.278	2.6
Pittsburgh, Pa	1.403	2.0	Grand Rapids, Mich	1.272	1.0
Group III (250,000 to 500,000):			Spokane, Wash	1.252	3.6
Newark, N. J	1.615	3.7	South Bend, Ind	1.250	0
Columbus, Ohio	1.525	4.0	Norfolk, Va	1.248	1.9
Cincinnati, Ohio	1.516	5.2	Springfield, Mass	1.246	1.4
Toledo, Ohio	1.492	1.4	New Haven, Conn	1.244	5.4
Seattle, Wash	1.469	2.4	Nashville, Tenn	1.219	.9
Indianapolis, Ind	1.460	4.0	Charlotte, N. C	1.202	2.3
Providence, R. I	1.446	.7	Oklahoma City, Okla	1.199	1.6
St. Paul, Minn	1.426	2.0	Wichita, Kans	1.134	4.9
Minneapolis, Minn	1.413	3.3	Group V (40,000 to 100,000):		
Average for group III	*1.412*		Butte, Mont	1.376	.3
Portland, Oreg	1.396	2.5	Binghamton, N. Y	1.320	2.0
Houston, Tex	1.383	3.7	Phoenix, Ariz	1.308	.4
Memphis, Tenn	1.377	2.2	Madison, Wis	1.290	2.9
Denver, Colo	1.374	3.7	El Paso, Tex	1.287	4.4
Kansas City, Mo	1.350	.9	Charleston, W. Va	1.257	1.5
Rochester, N. Y	1.342	1.1	*Average for group V*	*1.249*	
Dallas, Tex	1.319	.8	Manchester, N. H	1.206	0
Atlanta, Ga	1.291	.2	Charleston, S. C	1.184	0
Louisville, Ky	1.291	0	Portland, Maine	1.182	0
San Antonio, Tex	1.262	.9	Mobile, Ala	1.178	.4
Birmingham, Ala	1.249	1.1	Little Rock, Ark	1.166	1.1
New Orleans, La	1.217	6.1			

[1] Includes Rock Island and Moline, Ill., and Davenport, Iowa.

CHART 3

AVERAGE UNION WAGE RATES IN PRINTING TRADES ACCORDING TO SIZE OF CITY AND REGION

JULY 1, 1944



Weekly Hours [4]

Average straight-time weekly hours remained unchanged during the period of the study, July 1, 1943, to July 1, 1944; in fact they have changed very little during recent years, as indicated in table 7.

TABLE 7.—*Indexes of Union Weekly Hours in All Printing Trades, 1907–44*

Year	Indexes of weekly hours (1939=100)			Year	Indexes of weekly hours (1939=100)		
	All printing	Book and job	Newspaper		All printing	Book and job	Newspaper
1907	(1)	136.6	120.5	1926	114.1	111.7	118.6
1908	(1)	130.3	119.9	1927	114.0	111.7	118.3
1909	(1)	129.2	119.6	1928	114.0	111.7	118.0
1910	(1)	128.8	119.3	1929	113.9	111.6	117.8
1911	127.1	128.8	119.3	1930	113.8	111.5	117.6
1912	127.0	128.7	119.1	1931	113.7	111.5	117.6
1913	126.9	128.7	119.0	1932	109.9	107.2	114.6
1914	126.8	128.7	118.7	1933	109.0	106.1	114.0
1915	126.8	128.7	118.6	1934	103.4	102.4	105.0
1916	126.8	128.7	118.5	1935	101.7	100.9	103.2
1917	126.8	128.7	118.5	1936	101.3	101.0	101.9
1918	126.8	128.7	118.5	1937	100.8	100.8	101.0
1919	126.8	128.6	118.7	1938	100.3	100.3	100.5
1920	123.1	123.8	118.6	1939	100.0	100.0	100.0
1921	115.6	113.9	118.3	1940	99.8	99.8	99.7
1922	115.2	112.5	120.6	1941	99.8	99.8	99.3
1923	114.7	111.8	120.4	1942	99.5	99.8	99.2
1924	114.2	111.8	118.7	1943	99.8	100.1	99.2
1925	114.2	111.9	118.4	1944	99.8	100.1	99.2

[1] Combined data for the years 1907–10 not available.

On July 1, 1944, union printing-trades workers averaged 39 straight-time hours per week (table 8). Book and job workers averaged 39.7 and newspaper workers 37.5. Over two-thirds of the union members worked a 40-hour straight-time week; a fifth had a 37½-hour week, and less than 1 percent worked more than 40 hours at straight time. Practically all of the book and job workers had the 40-hour week, but more than three-fourths of the newspaper workers had weeks of 37½ hours or less. Night-shift workers generally reported shorter hours than day-shift workers. Only 13.4 percent of the night workers had straight-time hours longer than 37½ per week, but the hours of more than a third of the day workers exceeded 37½.

Photoengravers had the shortest average straight-time hours (37.2) among the book and job trades. Practically all of the union members in each of the book and job classifications except photoengravers had the 40-hour week. A majority of the photoengravers worked 37½ hours, and more than a fourth worked 35 hours, at straight time. None of the book and job members had straight-time weeks exceeding 40 hours.

Stereotypers had the shortest average hours among the newspaper trades (37.2). A majority of the union members in each of the individual newspaper trades except day-shift mailers worked 37½ hours per week or less at straight time. More than half of the night-shift pressmen and pressmen-in-charge and about one-half of the night stereotypers worked 35 hours or less at straight time. In contrast more than two-thirds of the day mailers worked 40 hours before re-

[4] Weekly hours discussed in this section refer to the scheduled workweek at regular pay. Actual time worked may be longer or shorter than the scheduled week.

ceiving overtime rates. A few union members in the newspaper branch were required to work more than 40 hours at straight time. Most of these were day-shift pressmen or pressmen-in-charge.

TABLE 8.—*Percentage Distribution of Union Members in the Printing Trades, by Straight-Time Hours, July 1, 1944*

Trade	Average hours per week	Percent of members whose hours per week were—							
		30	Over 30 and under 35	35	Over 35 and under 37½	37½	Over 37½ and under 40	40	Over 40
All printing trades	39.0	0.1	1.3	4.7	4.4	21.3	0.9	67.0	0.3
Book and job	39.7	(1)	(1)	2.3	(1)	6.6	.1	91.0	.....
Bindery women	40.0	.....	.....	.....	.....	.....	.....	100.0	.....
Bookbinders	40.0	.....	.....	.....	.....	.....	.....	100.0	.....
Compositors, hand	39.9	.....	.....	.....	.....	3.7	.....	96.3	.....
Electrotypers	40.0	.....	.....	.2	.....	.....	.8	99.0	.....
Machine operators	39.8	.4	.1	.7	.....	3.6	.....	95.2	.....
Machine tenders (machinists)	39.9	.....	.....	.....	.....	5.4	.....	94.6	.....
Mailers	39.8	.....	.....	.8	1.0	4.6	.....	93.6	.....
Photoengravers	37.2	.....	.....	26.7	.4	57.6	.....	15.3	.....
Press assistants and feeders	39.9	.....	.....	.....	.....	2.1	.....	97.9	.....
Pressmen, cylinder	39.9	.....	.....	.....	.....	1.9	.4	97.7	.....
Pressmen, platen	39.9	.....	.....	.....	.....	2.4	.....	97.6	.....
Newspaper	37.5	.1	3.8	9.4	12.8	50.3	2.4	20.4	.8
Day work	38.1	.1	.3	4.7	7.7	52.1	4.1	29.3	1.7
Night work	37.0	.2	7.0	13.5	17.5	48.4	.9	12.5	.....
Compositors, hand	37.4	.....	.....	.....	.....	.....	.....	.....	.....
Day work	37.6	.2	.1	7.5	15.1	58.4	2.5	16.1	.1
Night work	37.3	.1	.1	7.3	19.2	62.6	.6	10.1	.....
Machine operators	37.5	.....	.....	.....	.....	.....	.....	.....	.....
Day work	37.6	.2	.4	7.4	14.4	56.6	3.9	17.0	.1
Night work	37.4	.1	.1	8.5	17.9	60.5	1.2	11.7	.....
Machine tenders (machinists)	37.5	.....	.....	.....	.....	.....	.....	.....	.....
Day work	37.5	.....	.5	5.1	16.0	63.0	2.4	13.0	.....
Night work	37.5	.....	.5	5.7	17.7	59.1	.5	16.5	.....
Mailers	38.2	.....	.....	.....	.....	.....	.....	.....	.....
Day work	39.3	.....	.1	.7	.1	25.9	3.4	69.8	.....
Night work	37.5	.....	.5	12.6	20.7	48.1	2.0	16.1	.....
Photoengravers	38.0	.....	.....	.....	.....	.....	.....	.....	.....
Day work	38.3	.....	.....	.....	.1	67.3	1.8	30.8	.....
Night work	37.8	.....	.....	5.5	.5	76.7	1.5	15.8	.....
Pressmen (journeymen)	37.4	.....	.....	.....	.....	.....	.....	.....	.....
Day work	38.7	.....	.....	.3	.4	52.6	6.7	33.4	6.6
Night work	35.9	.....	23.3	32.0	21.6	11.8	.2	11.1	.....
Pressmen-in-charge	37.4	.....	.....	.....	.....	.....	.....	.....	.....
Day work	38.8	.....	.....	.6	.7	51.6	3.3	34.5	9.3
Night work	35.9	.....	17.9	33.5	27.9	12.9	.4	7.4	.....
Stereotypers	37.2	.....	.....	.....	.....	.....	.....	.....	.....
Day work	38.3	.....	1.3	8.9	1.4	41.7	5.9	40.8	.....
Night work	35.6	1.2	33.4	10.9	2.1	35.0	.1	17.3	.....

[1] Less than a tenth of 1 percent.

Overtime and Sunday Rates

All of the union members in book and job printing and practically all (98 percent) of those on newspapers received time and a half if required to work beyond the regular hours specified in the union agreement.

Over 90 percent of the book and job members received double time if required to work on Sunday. In the newspaper branch, however, where Sunday is often a regular workday, a majority of the union members received time and a half if required to work a seventh consecutive day or on Sunday. About two-fifths received double time for Sunday work if it was not a regularly scheduled day.

Vacations

Annual vacations with pay are more prevalent in the newspaper than in the book and job branch of the industry, 86 and 60 percent of the members, respectively, being covered by such provisions.

Practically all of the book and job workers who received vacations were covered by agreements providing 1 week after 1 year of service although a few also received additional vacations for longer periods of service, such as 2 weeks after 2 or 5 years. Only 1.4 percent of those who received vacations had 2 weeks' vacation after 1 year of service, and miscellaneous provisions covered 2.8 percent.

Not only was a larger percentage of newspaper members covered by vacation provisions, but many of the provisions were more liberal. Almost 65 percent of the newspaper union members who received vacations were covered by provisions calling for 2 weeks after 1 year of service. More than a fourth received 1 week after 1 year, a few of these having longer vacations after longer periods of service; 4.4 percent were covered by other miscellaneous vacation arrangements

Trend of Factory Earnings, 1939 to December 1944

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to December 1944.[1] The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income and victory taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged $47.45 in December 1944—104.6 percent above the average in January 1939, 78.1 percent above January 1941, and 22.0 percent above October 1942. Such factors as longer hours of work, merit increases for individual workers, premium pay for overtime worked, changing composition of the labor force within plants, shifts in the distribution of workers among plants and among industries, as well as wage-rate increases, account for the rise in earnings.

Gross hourly earnings in all manufacturing averaged 104.0 cents in December 1944—64.6 percent above the average in January 1939, 52.3 percent above January 1941, and 16.5 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are estimated to exclude premium pay at time and a half for work in excess of 40 hours. The effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in December 1944 was 96.3 cents per hour; this was 54.6 percent higher than in January 1939, 45.0 percent above January 1941, and 14.8 percent above October 1942.

[1] Compare Trends in Factory Wages, 1939–43, in Monthly Labor Review, November 1943 (pp. 869–884), especially table 4 (p. 879). For detailed data regarding weekly earnings, see Detailed Reports for Industrial and Business Employment, December 1944, table 6 (p. 635), of this issue.

Earnings of Factory Workers in Selected Months, 1939 to December 1944

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings [1]			Estimated straight-time average hourly earnings weighted by January 1939 employment [2]		
	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods	All manufacturing	Durable goods	Nondurable goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1939: Jan.	$23.19	$25.33	$21.57	$0.632	$0.696	$0.583	$0.623	$0.688	$0.574	$0.623	$0.688	$0.574
1940: Jan.	24.56	27.39	22.01	.655	.717	.598	.644	.703	.589	.635	.697	.589
1941: Jan.	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601	.648	.711	.600
1942: Jan.	33.40	38.98	26.97	.801	.890	.688	.762	.835	.670	.729	.810	.667
July	36.43	42.51	28.94	.856	.949	.725	.809	.885	.701	.759	.846	.694
Oct.	38.89	45.31	30.66	.893	.990	.751	.839	.919	.723	.782	.869	.716
1943: Jan.	40.62	46.68	32.10	.919	1.017	.768	.859	.941	.733	.794	.886	.724
Apr.	42.48	48.67	33.58	.944	1.040	.790	.878	.957	.751	.808	.897	.741
July	42.76	48.76	34.01	.963	1.060	.806	.899	.981	.766	.823	.919	.750
Oct.	44.86	51.26	35.18	.988	1.086	.824	.916	.997	.781	.836	.929	.765
Dec.	44.58	50.50	35.61	.995	1.093	.832	.927	1.011	.788	.846	.942	.773
1944: Jan.	45.29	51.21	36.03	1.002	1.099	.838	.931	1.013	.793	.850	.945	.778
Apr.	45.55	51.67	36.16	1.013	1.110	.850	.942	1.023	.806	.862	.955	.792
July	45.43	51.07	37.05	1.018	1.116	.862	.950	1.035	.815	.874	.973	.799
Oct.	46.94	53.18	37.97	1.031	1.129	.878	.956	1.038	.829	.881	.969	.815
Nov.[3]	46.86	53.07	37.87	1.035	1.137	.877	.962	1.048	.828	.882	.971	.814
Dec.[3]	47.45	53.69	38.40	1.040	1.140	.883	.963	1.047	.832	.886	.975	.818

[1] Average hourly earnings, excluding the effect of premium pay for overtime.
[2] Average hourly earnings, excluding premium pay for overtime, weighted by man-hours of employment in the major divisions of the manufacturing industry for January 1939.
[3] Preliminary.

The shift of workers from relatively low-wage to relatively high-wage industries since 1939 would have raised the average earnings of factory workers, even if no other influences had been present. The effects of such interindustry shifts have been eliminated from the averages shown in columns 10 to 12 of the table. If employment had been distributed between industries as it was in January 1939, the straight-time hourly earnings of factory workers would have averaged 88.6 cents in December 1944, or 42.2 percent above the corresponding average in January 1939, 36.7 percent above January 1941, and 13.3 percent above October 1942. Between November 1944 and December 1944 the increase in straight-time hourly earnings, after eliminating the influence of shifting employment, amounted to 0.5 percent. Even this latter series of averages exaggerates the rise in wage rates, because it includes the influence of interplant shifts of employment, merit increases for individual workers, and premium rates for work on extra shifts and on holidays.

Cost of Living and Retail Prices

Living Costs in Large Cities, January 1945

RETAIL prices to city wage earners and lower-salaried workers rose slightly (by 0.1 percent) between mid-December and mid-January. Scattered price increases for cotton clothing and for housefurnishings more than offset a small decline in average food prices.

The Bureau of Labor Statistics index of living costs for January 1945 was 127.1 percent of the 1935–39 average, and 2.3 percent above the level of January 1944.

Substantial decreases in egg prices, usual at this time of year, were mainly responsible for the 0.1 percent decrease in average food costs over the month. Small reductions in prices of fresh and frozen fish and of canned fruits and vegetables also occurred. Fresh fruits and vegetables were up 3.5 percent on the average, as higher prices for oranges, apples, cabbage, onions, green beans, white potatoes, and sweetpotatoes more than counterbalanced decreases in prices of lettuce, carrots, spinach, and bananas.

The shortage of low-cost clothing, especially cotton wash dresses, men's overalls, business shirts, socks, and woolen sweaters caused a rise of 0.1 percent in average clothing costs. There were some price declines, reflecting end-of-season sales, chiefly for women's heavy winter coats. Similar reductions in prices of men's coats were not as widespread as is usual at this time of year.

Housefurnishings prices rose 0.4 percent, mainly because of the disappearance of lower-priced lines of living-room and bedroom suites.

Prices for fuel, electricity, and ice rose 0.3 percent, primarily because of return to regular bills for gas or electricity in three cities—Atlanta, Cleveland, and Detroit—after rebates were granted in December. In Cleveland a lower rate was set in December. In two cities—New Orleans and Minneapolis—gas rates were lowered in January, with rebates allowed for the month in New Orleans. Prices of heating fuels remained stable on the average, but supplies became so short in the Northeastern states, because of interruption of transportation by snow, that officials in several cities resorted to temporary rationing procedures.

Prices of miscellaneous goods and services remained stable, on the average. In Buffalo, N. Y., charges for streetcar tokens were lowered in January.

Rents were not surveyed in January.

In connection with the data in the following tables it should be borne in mind that the Bureau of Labor Statistics index indicates average changes in retail prices of selected goods, rents, and services bought by families of wage earners and lower-salaried workers in large cities. The items covered represented 70 percent of the expenditures of families who had incomes ranging from $1,250 to $2,000 in 1934–36. The index does not show the full wartime effect on the cost of living of such factors as lowered quality, disappearance of low-priced goods, and forced changes in housing and eating away from home. It does not measure changes in *total* "living costs"—that is, *in the total amount families spend for living.* Income taxes and bond subscriptions are not included.[1]

TABLE 1.—*Indexes of Cost of Living in Large Cities, Jan. 15, 1945, and Earlier Dates*

Date	Indexes [1] (1935–39=100.0) of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1939: Aug. 15	98.6	93.5	100.3	104.3	97.5	100.6	100.4
1941: Jan. 15	100.8	97.8	100.7	105.0	100.8	100.1	101.9
1942: May 15	116.0	121.6	126.2	109.9	104.9	122.2	110.9
Sept. 15	117.8	126.6	125.8	108.0	106.2	123.6	111.4
1944: Jan. 15	124.2	136.1	134.7	108.1	109.5	128.3	118.4
Dec. 15	127.0	137.4	142.8	108.3	109.4	143.0	123.1
1945: Jan. 15	127.1	137.3	143.0	[2]	109.7	143.6	123.1

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in January.

TABLE 2.—*Percent of Change* [1] *in Cost of Living in Large Cities in Specified Periods*

Date	All items	Food	Clothing	Rent [2]	Fuel, electricity, and ice	House-furnishings	Miscellaneous
Dec. 15, 1944, to Jan. 15, 1945	+0.1	−0.1	+0.1	[3]	+0.3	+0.4	0
Jan. 15, 1944, to Jan. 15, 1945	+2.3	+.9	+6.2	+0.2	+.2	+11.9	+4.0
Sept. 15, 1942, to Jan. 15, 1945	+7.9	+8.5	+13.7	+.3	+3.3	+16.2	+10.5
May 15, 1942, to Jan. 15, 1945	+9.6	+12.9	+13.3	−1.5	+4.6	+17.5	+11.0
Jan. 15, 1941, to Jan. 15, 1945	+26.1	+40.4	+42.0	+3.1	+8.8	+43.5	+20.8
Aug. 15, 1939, to Jan. 15, 1945	+28.9	+46.8	+42.6	+3.8	+12.5	+42.7	+22.6

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Changes through Dec. 15, 1944.
[3] Rents not surveyed in January.

[1] For description of methods used in computing the index, see Description of the Cost of Living Index of the Bureau of Labor Statistics. An appraisal of the factors enumerated above was given in the report of the President's Committee on the Cost of Living, November 17, 1944.

TABLE 3.—*Percent of Change* [1] *in Cost of Living in Specified Periods, by Cities*

City	Jan. 15, 1944, to Jan. 15, 1945	Aug. 15, 1939, to Jan. 15, 1945	Jan. 1, 1941, to Jan. 15, 1945	May 15, 1942, to Jan. 15, 1945	Sept. 15, 1942, to Jan. 15, 1945
Average: Large cities	+2.3	+28.9	+26.1	+9.6	+7.9
New England: Boston	+2.0	+27.2	+24.6	+8.9	+6.3
Middle Atlantic:					
Buffalo	+1.8	+29.3	+25.0	+5.7	+5.7
New York	+2.6	+29.2	+26.6	+12.9	+10.0
Philadelphia	+2.0	+28.7	+26.9	+9.8	+7.7
Pittsburgh	+3.0	+30.2	+26.6	+10.6	+9.0
East North Central:					
Chicago	+2.6	+27.6	+24.4	+8.1	+7.3
Cincinnati	+2.5	+30.5	+27.5	+9.6	+7.6
Cleveland	+1.6	+29.8	+27.3	+9.3	+8.5
Detroit	+1.9	+29.3	+26.1	+7.2	+7.6
West North Central:					
Kansas City	+2.6	+26.9	+27.1	+9.6	+9.1
Minneapolis	+2.0	+23.6	+21.0	+6.3	+5.5
St. Louis	+2.2	+28.0	+24.4	+8.7	+7.7
South Atlantic:					
Baltimore	+2.9	+31.4	+28.8	+9.7	+8.3
Savannah	+1.7	+35.9	+33.0	+11.6	+10.5
Washington, D. C	+2.0	+27.9	+26.2	+9.9	+7.7
East South Central: Birmingham	+2.7	+33.3	+29.2	+10.6	+10.5
West South Central: Houston	+1.4	+24.2	+22.6	+7.7	+6.0
Mountain: Denver	+2.9	+28.0	+26.2	+9.2	+7.7
Pacific:					
Los Angeles	+2.2	+28.5	+26.0	+9.3	+6.1
San Francisco	+3.4	+32.9	+29.7	+12.2	+9.2
Seattle	+2.0	+30.6	+28.3	+8.1	+6.8

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.

TABLE 4.—*Percent of Change* [1] *in Cost of Living, Dec. 15, 1944, to Jan. 15, 1945, by Cities*

City	All items	Food	Clothing	Fuel, electricity and ice	House-furnishings	Miscellaneous
Average: Large cities	[2] +0.1	[3] −0.1	[4] +0.1	[3] +0.3	[4] +0.4	[4] 0
New England: Boston	0	+.1	−.1	0	0	+.1
Middle Atlantic:						
Buffalo	+.2	+1.0	−.4	0	−.1	−.4
New York	0	0	+.1	0	0	0
Philadelphia	0	+.1	0	+.1	+.1	0
Pittsburgh	+.1	+.2	+.2	0	0	0
East North Central:						
Chicago	−.3	−.9	+.3	0	+.3	+.2
Cincinnati	[5] +.3	+.6	−.3	0	0	[5] +.4
Cleveland	+.5	+.1	+.1	+7.8	0	0
Detroit	−.1	−.2	+.1	+.4	+.1	0
West North Central:						
Kansas City	+.2	+.5	+.2	0	+.1	+.1
Minneapolis	0	+.2	0	−.5	0	0
St. Louis	+.2	+.6	−.1	0	0	0
South Atlantic:						
Baltimore	+.4	+.9	+.5	−.2	0	0
Savannah	+.2	+.3	+.3	0	+2.9	−.1
Washington, D. C	+.2	+.7	+.2	0	+.1	−.1
East South Central: Birmingham	+.2	+.4	+.4	+.2	+.1	0
West South Central: Houston	+.3	+.4	0	0	+4.5	0
Mountain: Denver	+.1	−.1	+.2	0	+2.1	0
Pacific:						
Los Angeles	0	−.3	+.6	0	+1.1	0
San Francisco	−.5	−1.5	+.3	0	0	+.1
Seattle	−.1	−.3	+.3	+.2	0	0

[1] Based on indexes of cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in January.
[3] Based on prices for 56 cities collected on the Tuesday nearest the 15th of the month.
[4] Based on data for 21 cities.
[5] Based on data for 34 cities.
[6] Revised indexes for December 1944: All items, 126.6; miscellaneous, 124.5

TABLE 5.—*Indexes of Cost of Living in Large Cities, 1935 to January 1945*

Year and month	Indexes [1] (1935–39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1935	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944	125.5	136.1	138.8	108.2	109.8	136.4	121.3
Jan. 15	124.2	136.1	134.7	108.1	109.5	128.3	118.4
Feb. 15	123.8	134.5	135.2	108.1	110.3	128.7	118.7
Mar. 15	123.8	134.1	136.7	108.1	109.9	129.0	119.1
Apr. 15	124.6	134.6	137.1	108.1	109.9	132.9	120.9
May 15	125.1	135.5	137.4	108.1	109.8	135.0	121.3
June 15	125.4	135.7	138.0	108.1	109.6	138.4	121.7
July 15	126.1	137.4	138.3	108.2	109.7	138.7	122.0
Aug. 15	126.4	137.7	139.4	108.2	109.8	139.3	122.3
Sept. 15	126.5	137.0	141.4	108.2	109.8	140.7	122.4
Oct. 15	126.5	136.4	141.9	[2]	109.8	141.4	122.8
Nov. 15	126.6	136.5	142.1	[2]	109.9	141.7	122.9
Dec. 15	127.0	137.4	142.8	108.3	109.4	143.0	123.1
1945: Jan. 15	127.1	137.3	143.0	[2]	109.7	143.6	123.1

[1] Based on changes in cost of goods purchased by wage earners and lower-salaried workers.
[2] Rents not surveyed in this month.

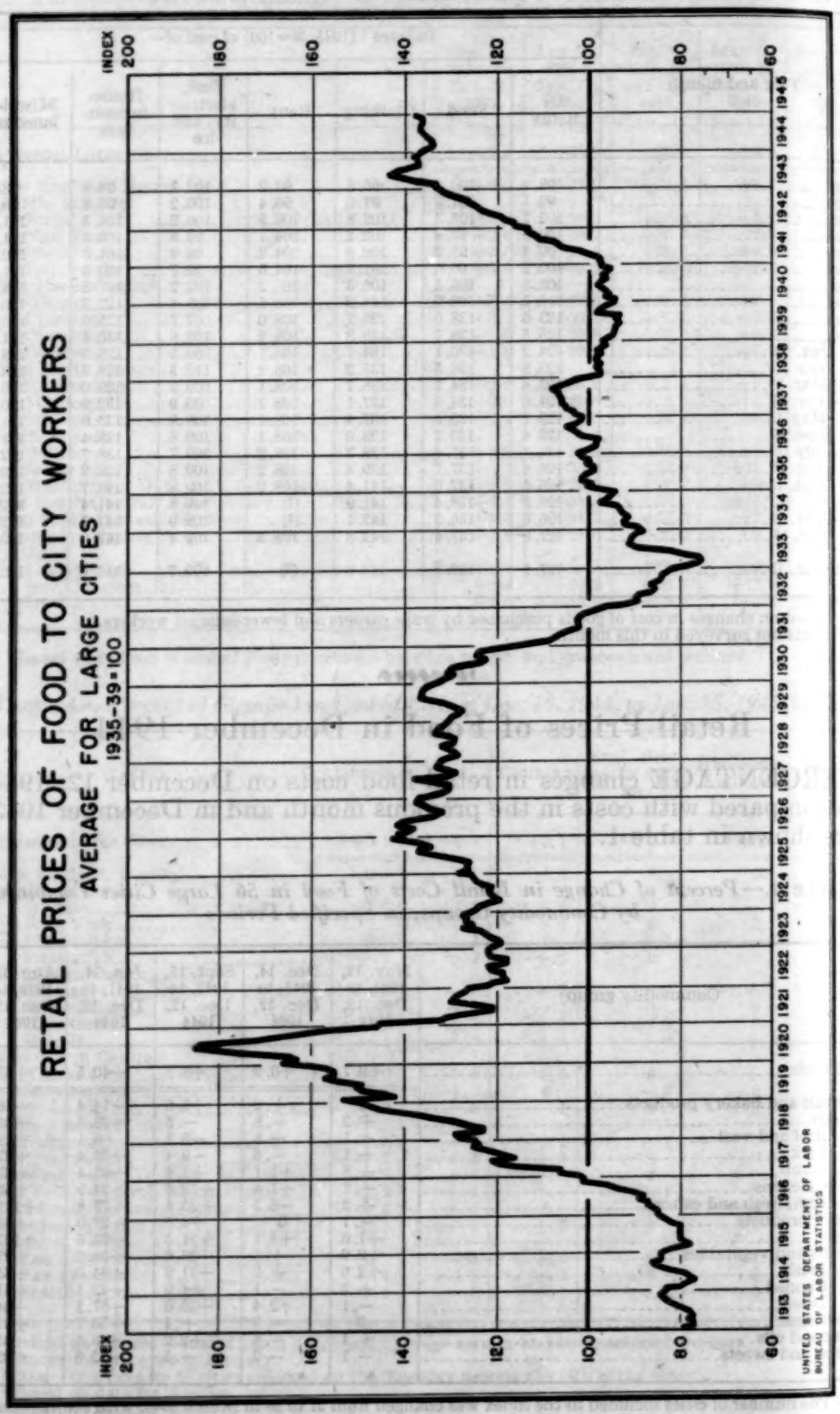
Retail Prices of Food in December 1944

PERCENTAGE changes in retail food costs on December 12, 1944, as compared with costs in the previous month and in December 1943, are shown in table 1.

TABLE 1.—*Percent of Change in Retail Costs of Food in 56 Large Cities Combined,*[1] *by Commodity Groups, in Specified Periods*

Commodity group	Nov. 14, 1944, to Dec. 12, 1944	Dec. 14, 1943, to Dec. 12, 1944	Sept. 15, 1942, to Dec. 12, 1944	Jan. 14, 1941, to Dec. 12, 1944	Aug. 15, 1939, to Dec. 12, 1944
All foods	+0.7	+0.2	+8.5	+40.5	+47.0
Cereals and bakery products	0	+.2	+3.0	+14.4	+16.3
Meats	+.2	−.8	−.5	+28.5	+35.7
Beef and veal	+.1	−.8	−6.1	+8.1	+18.8
Pork	+.1	−.6	−9.4	+30.4	+27.6
Lamb	+.8	+1.1	+1.4	+37.4	+37.2
Chickens	+.1	+1.4	+12.6	+54.9	+59.2
Fish, fresh and canned	+.3	−6.3	+25.4	+77.8	+111.8
Dairy products	−.1	0	+4.5	+27.0	+43.4
Eggs	+1.0	+4.1	+21.5	+93.5	+107.8
Fruits and vegetables	+2.2	+.3	+26.6	+76.0	+77.7
Fresh	+2.6	+.2	+31.9	+84.0	+85.2
Canned	+.2	−.1	+4.9	+42.1	+41.8
Dried	−.1	+2.4	+16.0	+67.1	+84.3
Beverages	0	−.3	+.4	+36.7	+31.0
Fats and oils	+.1	−.8	+2.2	+53.5	+45.9
Sugar and sweets	−.1	−.2	−.5	+32.6	+32.2

[1] The number of cities included in the index was changed from 51 to 56 in March 1943, with the necessary adjustments for maintaining comparability. At the same time the number of foods in the index was increased from 54 to 61.


RETAIL PRICES OF FOOD TO CITY WORKERS
AVERAGE FOR LARGE CITIES
1935-39=100
INDEX
200
180
160
140
120
100
80
60
1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

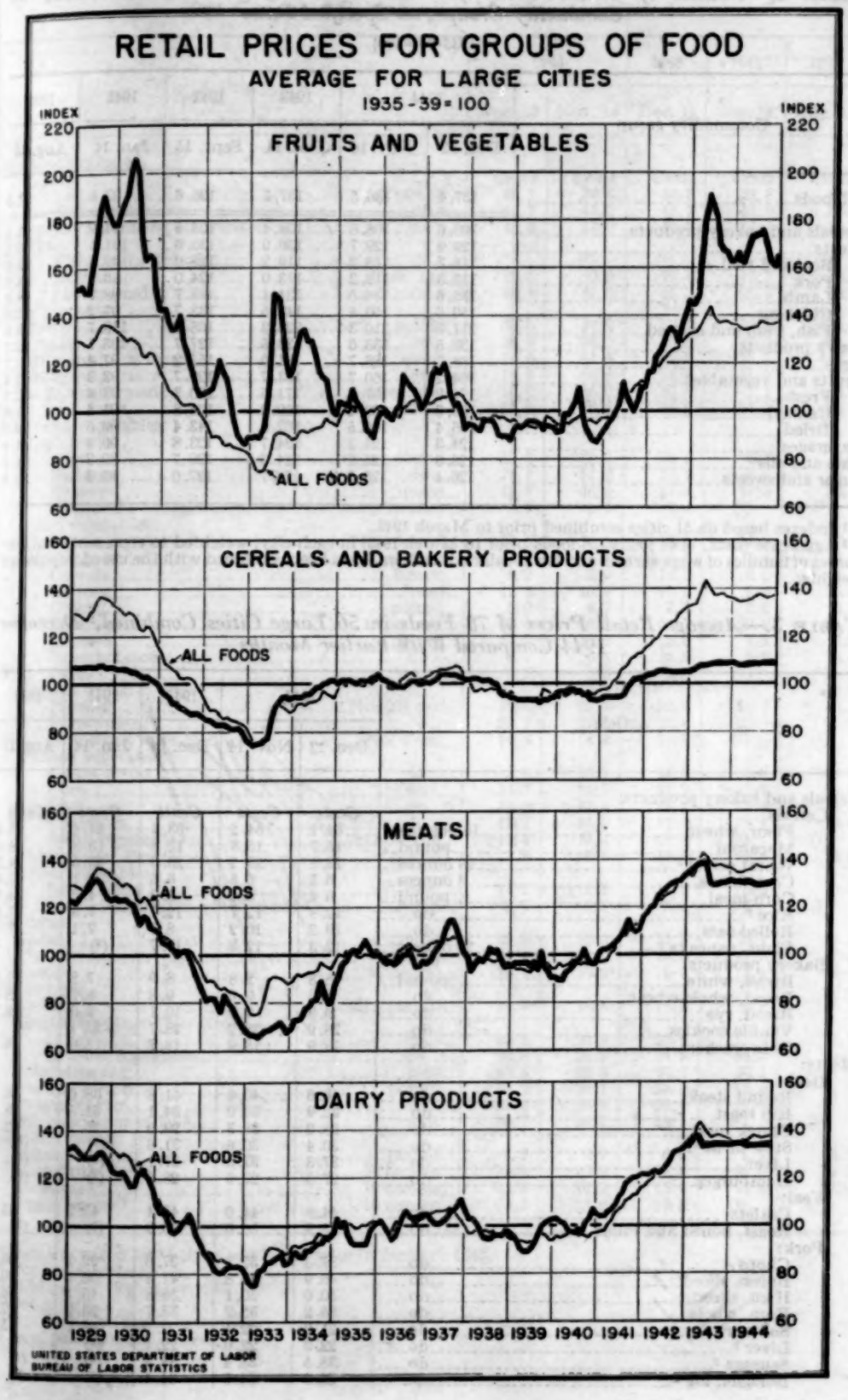

RETAIL PRICES FOR GROUPS OF FOOD
AVERAGE FOR LARGE CITIES
1935-39=100
INDEX
FRUITS AND VEGETABLES
ALL FOODS
CEREALS AND BAKERY PRODUCTS
ALL FOODS
MEATS
ALL FOODS
DAIRY PRODUCTS
ALL FOODS
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

TABLE 2.—*Indexes of Retail Costs of Food in 56 [1] Large Cities Combined,[2] by Commodity Groups, on Specified Dates*

[1935-39=100]

Commodity group	1944		1943	1942	1941	1939
	Dec. 12	Nov. 14	Dec. 14	Sept. 15	Jan. 14	Aug. 15
All foods	137.4	136.5	137.1	126.6	97.8	93.5
Cereals and bakery products	108.6	108.6	108.4	105.4	94.9	93.4
Meats	129.9	129.7	130.9	130.6	101.1	95.7
Beef and veal	118.3	118.2	119.2	126.0	109.4	99.6
Pork	112.3	112.2	113.0	124.0	86.1	88.0
Lamb	135.6	134.5	134.1	133.7	98.7	98.8
Chickens	150.6	150.4	148.5	133.7	97.2	94.6
Fish, fresh and canned	211.0	210.3	225.2	168.2	118.7	99.6
Dairy products	133.5	133.6	133.5	127.7	105.1	93.1
Eggs	188.5	186.7	181.0	155.2	97.4	90.7
Fruits and vegetables	164.2	160.7	163.7	129.7	93.3	92.4
Fresh	171.9	167.6	171.5	130.3	93.4	92.8
Canned	129.9	129.6	130.0	123.8	91.4	91.6
Dried	166.4	166.5	162.5	143.4	99.6	90.3
Beverages	124.3	124.3	124.7	123.8	90.9	94.9
Fats and oils	123.3	123.2	124.3	120 7	80.3	84.5
Sugar and sweets	126.4	126.5	126.7	127.0	95.3	95.5

[1] Indexes based on 51 cities combined prior to March 1943.

[2] Aggregate costs, of 61 foods (54 foods prior to March 1943) in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,[1] December 1944 Compared With Earlier Months*

Article		1944		1943	1941	1939
		Dec. 12	Nov. 14	Dec. 14	Jan. 14	Aug. 15
Cereals and bakery products:						
Cereals:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Flour, wheat	10 pounds	64.1	64.2	63.4	41.4	35.8
Macaroni	pound	15.7	15.8	15.6	13.8	14.0
Wheat cereal [2]	28 ounces	23.1	23.2	23.3	23.5	24.2
Corn flakes	8 ounces	6.5	6.5	6.6	7.1	7.0
Corn meal	pound	6.4	6.4	5.9	4.2	4.0
Rice [2]	do	12.8	12.7	12.7	7.9	7.5
Rolled oats	do	10.2	10.2	8.7	7.1	7.1
Flour, pancake [2]	20 ounces	12.3	12.3	11.7	(3)	(3)
Bakery products:						
Bread, white	pound	8.8	8.8	8.9	7.8	7.8
Bread, whole-wheat	do	9.6	9.6	9.8	8.7	8.8
Bread, rye	do	9.9	9.9	10.1	9.0	9.2
Vanilla cookies	do	28.9	28.2	28.7	25.1	(4)
Soda crackers	do	18.9	18.9	18.7	15.0	14.8
Meats:						
Beef:						
Round steak	do	40.6	40.6	41.8	38.6	36.4
Rib roast	do	32.9	33.0	34.1	31.5	28.9
Chuck roast	do	28.2	28.3	29.0	25.2	22.5
Stew meat [2]	do	30.4	30.6	31.6	(3)	(3)
Liver	do	37.3	37.3	37.1	(4)	(4)
Hamburger	do	27.5	27.5	28.8	(3)	(3)
Veal:						
Cutlets	do	44.8	44.6	46.1	45.2	42.5
Roast, boned and rolled [2]	do	35.9	36.0	35.9	(3)	(3)
Pork:						
Chops	do	37.3	37.3	37.6	29.1	30.9
Bacon, sliced	do	40.9	40.8	41.4	30.1	30.4
Ham, sliced	do	50.0	50.1	51.8	45.1	46.4
Ham, whole	do	35.2	35.2	35.7	26.2	27.4
Salt pork	do	21.9	22.1	22.7	16.7	15.4
Liver [2]	do	22.0	22.0	22.1	(3)	(3)
Sausage [2]	do	38.5	38.4	38.3	(3)	(3)
Bologna, big [2]	do	33.9	34.0	34.4	(3)	(3)

See footnotes at end of table.

TABLE 3.—*Average Retail Prices of 78 Foods in 56 Large Cities Combined,*[1] *December 1944 Compared With Earlier Months*—Continued

Article		1944		1943	1941	1939
		Dec. 12	Nov. 14	Dec. 14	Jan. 14	Aug. 15
Meats—Continued.						
Lamb:		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Leg	pound	40.1	39.9	40.3	27.8	27.6
Rib chops	do	45.7	45.3	45.7	35.0	36.7
Poultry: Roasting chickens	do	45.0	45.0	44.7	31.1	30.9
Fish:						
Fish (fresh, frozen)	do	(3)	(3)	(3)	(3)	(3)
Salmon, pink	16-oz. can	22.5	22.9	23.4	15.7	12.8
Salmon, red [2]	do	40.4	41.5	41.3	26.4	23.1
Dairy products:						
Butter	pound	50.0	49.8	50.2	38.0	30.7
Cheese	do	36.0	36.2	36.0	27.0	24.7
Milk, fresh (delivered)	quart	15.6	15.6	15.6	13.0	12.0
Milk, fresh (store)	do	14.5	14.5	14.4	11.9	11.0
Milk, evaporated	14½-oz. can	10.0	10.0	10.0	7.1	6.7
Eggs: Eggs, fresh	dozen	66.9	66.3	63.9	34.9	32.0
Fruits and vegetables:						
Fresh fruits:						
Apples	pound	10.7	10.3	10.5	5.2	4.4
Bananas	do	11.1	11.2	12.2	6.6	6.1
Oranges	dozen	43.7	46.0	43.4	27.3	31.5
Grapefruit [2]	each	8.8	8.6	7.4	(4)	(5)
Fresh vegetables:						
Beans, green	pound	20.5	20.2	18.1	14.0	7.2
Cabbage	do	5.8	4.7	5.5	3.4	3.9
Carrots	bunch	9.2	9.0	10.2	6.0	4.6
Lettuce	head	12 5	10.9	13.0	8.4	8.4
Onions	pound	5.0	4.7	7.4	3.6	3.6
Potatoes	15 pounds	67.6	66.5	62.7	29.2	34.4
Spinach	pound	11.9	10.8	10.0	7.3	7.8
Sweetpotatoes	do	8.0	6.8	10.0	5.0	5.5
Beets [2]	bunch	9.7	7.9	9.8	(3)	(3)
Canned fruits:						
Peaches	No. 2½ can	27.8	27.7	26.4	16.5	17.1
Pineapple	do	26.7	27.2	27.8	20.9	21.0
Grapefruit juice	No. 2 can	14.4	14.4	14.4	(4)	(5)
Canned vegetables:						
Beans, green	do	13.1	13.1	14.5	10.0	10.0
Corn	do	14.7	14.7	14.2	10.7	10.4
Peas	do	13.2	13.3	14.4	13.2	13.6
Tomatoes	do	12.1	11.9	12.4	8.4	8.6
Soup, vegetable [2]	11-oz. can	13.3	13.4	13.1	(3)	(3)
Dried fruits: Prunes	pound	17.0	16.8	16.8	9.6	8.8
Dried vegetables:						
Navy beans	do	11.1	11.1	10.5	6.5	5.8
Soup, dehydrated, chicken noodle [2]	ounce	3.7	3.7	3.7	(3)	(3)
Beverages:						
Coffee	pound	30.3	30.3	29.9	20.7	22.3
Tea	¼ pound	24.0	24.0	23.6	17.6	17.2
Cocoa [2]	½ pound	10.4	10.4	9.5	9.1	8.6
Fats and oils:						
Lard	pound	18.8	18.8	18.8	9.3	9.9
Shortening other than lard—						
In cartons	do	20.2	20.2	20.0	11.3	11.7
In other containers	do	24.8	24.9	24.9	18.3	20.2
Salad dressing	pint	25.8	25.8	25.5	20.1	(4)
Oleomargarine	pound	24.2	24.1	24.0	15.6	16.5
Peanut butter	do	28.3	28.5	29.6	17.9	17.9
Oil, cooking or salad [2]	pint	30.7	30.7	30.7	(4)	(4)
Sugar and sweets:						
Sugar	pound	6.7	6.7	6.8	5.1	5.2
Corn sirup	24 ounces	15.8	15.8	15.9	13.6	13.7
Molasses [2]	18 ounces	15.9	15.9	15.9	13.4	13.6
Apple butter [2]	16 ounces	13.5	13.6	13.2	(3)	(3)

[1] Data are based on 51 cities combined prior to January 1943.
[2] Not included in index.
[3] First priced, February 1943.
[4] Not priced.
[5] Composite price not computed.
[6] First priced, October 1941.

TABLE 4.—*Indexes of Average Retail Costs of All Foods, by Cities,*[1] *on Specified Dates*

[1935–39=100]

City	1944		1943	1941	1939
	Dec. 12	Nov. 14	Dec. 14	Jan. 14	Aug. 15
United States	137.4	136.5	137.1	97.8	93.5
New England:					
Boston	132.7	131.8	130.9	95.2	93.5
Bridgeport	134.6	134.5	136.7	96.5	93.2
Fall River	132.2	131.6	132.6	97.5	95.4
Manchester	133.6	133.6	133.8	96.6	94.9
New Haven	135.3	135.2	136.9	95.7	93.7
Portland, Maine	133.1	133.2	134.4	95.3	95.9
Providence	135.7	135.6	134.2	96.3	93.7
Middle Atlantic:					
Buffalo	134.1	133.4	137.6	100.2	94.5
Newark	140.2	139.1	139.4	98.8	95.6
New York	138.7	137.4	139.1	99.5	95.8
Philadelphia	135.0	133.3	136.1	95.0	93.0
Pittsburgh	136.1	134.7	135.1	98.0	92.5
Rochester	134.0	132.4	132.5	99.9	92.3
Scranton	137.2	136.3	136.2	97.5	92.1
East North Central:					
Chicago	136.5	135.8	133.7	98.2	92.3
Cincinnati	134.7	134.4	135.9	96.5	90.4
Cleveland	140.6	142.6	142.6	99.2	93.6
Columbus, Ohio	129.4	129.0	130.7	93.4	88.1
Detroit	132.7	132.3	134.2	97.0	90.6
Indianapolis	133.8	133.1	134.4	98.2	90.7
Milwaukee	135.2	135.2	132.9	95.9	91.1
Peoria	140.5	140.2	140.8	99.0	93.4
Springfield, Ill	142.0	141.9	141.0	96.2	94.1
West North Central:					
Cedar Rapids [2]	139.9	139.6	139.7	95.9	----
Kansas City	131.0	130.3	132.7	92.4	91.5
Minneapolis	130.4	130.0	132.3	99.0	95.0
Omaha	130.0	130.3	132.2	97.9	92.3
St. Louis	139.5	138.5	139.3	99.2	93.8
St. Paul	129.1	128.3	131.8	98.6	94.3
Wichita [2]	147.3	147.2	148.8	97.2	----
South Atlantic:					
Atlanta	138.8	137.9	137.3	94.3	92.5
Baltimore	143.9	144.3	142.5	97.9	94.7
Charleston, S. C	135.0	134.7	134.4	95.9	95.1
Jacksonville	146.8	145.9	144.2	98.8	95.8
Norfolk [3]	143.2	142.0	145.1	95.8	93.6
Richmond	137.1	135.7	136.0	93.7	92.2
Savannah	150.5	150.6	149.7	100.5	96.7
Washington, D. C	137.1	136.7	135.9	97.7	94.1
Winston-Salem [2]	138.7	138.0	137.5	93.7	----
East South Central:					
Birmingham	142.3	141.3	141.2	96.0	90.7
Jackson [2]	151.3	150.2	144.6	105.3	----
Knoxville [2]	158.3	156.8	157.4	97.1	----
Louisville	132.0	131.0	134.0	95.5	92.1
Memphis	145.6	144.9	144.5	94.2	89.7
Mobile	144.6	145.0	144.9	97.9	95.5
West South Central:					
Dallas	133.4	132.7	135.5	92.6	91.7
Houston	135.9	134.6	137.3	102.6	97.8
Little Rock	137.0	136.3	135.5	95.6	94.0
New Orleans	150.3	149.7	149.0	101.9	97.6
Mountain:					
Butte	134.3	133.5	137.2	98.7	94.1
Denver	137.9	136.4	138.7	94.8	92.7
Salt Lake City	141.9	141.1	141.3	97.5	94.6
Pacific:					
Los Angeles	143.9	143.3	143.3	101.8	94.6
Portland, Oreg	148.1	146.8	144.9	101.7	96.1
San Francisco	149.1	146.3	143.7	99.6	93.8
Seattle	143.9	142.7	143.1	101.0	94.5

[1] Aggregate costs of 61 foods in each city (54 foods prior to March 1943), weighted to represent total purchases of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons, rather than place-to-place comparisons.

[2] June 1940=100.

[3] Includes Portsmouth and Newport News.

TABLE 5.—*Indexes of Retail Food Costs in 56 Large Cities Combined,*[1] *1913 to December 1944*

[1935-39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index	Year and month	All-foods index
1913	79.9	1929	132.5	*1943*		*1944*	
1914	81.8	1930	126.0				
1915	80.9	1931	103.9	January	133.0	January	136.1
1916	90.8	1932	86.5	February	133.6	February	134.5
1917	116.9	1933	84.1	March	137.4	March	134.1
1918	134.4	1934	93.7	April	140.6	April	134.6
1919	149.8	1935	100.4	May	143.0	May	135.5
1920	168.8	1936	101.3	June	141.9	June	135.7
1921	128.3	1937	105.3	July	139.0	July	137.4
1922	119.9	1938	97.8	August	137.2	August	137.7
1923	124.0	1939	95.2	September	137.4	September	137.0
1924	122.8	1940	96.6	October	138.2	October	136.4
1925	132.9	1941	105.5	November	137.3	November	136.5
1926	137.4	1942	123.9	December	137.1	December	137.4
1927	132.3	1943	138.0				
1928	130.8						

[1] Indexes based on 51 cities combined prior to March 1943.

Gas and Electricity: Price Changes in 1944

DURING the 12 months ending December 1944, the majority of domestic consumers of gas and electricity continued to enjoy a downward trend in utility rates, though the decrease was at a slackened rate. Decreases in bills for specified amounts of consumption on December 15, 1944, from similar bills 1, 5, and 15 years earlier, are shown in table 1.

TABLE 1.—*Percent of Decrease in Gas and Electricity Bills, December 15, 1944, Compared With Earlier Years*

Year and month	Percent of decrease in—			
	Gas bills for—		Electricity bills for—	
	10.6 therms	30.6 therms	25 kwh	100 kwh
December 1943 to December 1944	1.4	1.6	1.0	0.9
December 1939 to December 1944	4.5	6.5	3.3	3.4
December 1929 to December 1944	4.4	15.8	20.5	24.9

Prices of Gas

Although there were several changes of local importance in the prices for gas during the year 1944, these changes affected the composite indexes for gas in 50 cities only slightly. Table 2 shows net monthly bills and index numbers for December 1943 and 1944 for each of the 50 cities.

TABLE 2.—*Net Monthly Bills and Index Numbers for Specified Amounts of Gas, by City, Based on Rates as of December 15, 1943 and 1944*

Region and city	Heating value per cubic foot in British thermal units (as of Dec. 1944)	Net monthly bills for—								Index numbers (1923-25=100) for consumption of—			
		10.6 therms		19.6 therms		30.6 therms		40.6 therms		10.6 therms		30.6 therms	
		Dec. 1944[1]	Dec. 1943	Dec. 1944[1]	Dec. 1943	Dec. 1944[1]	Dec. 1943	Dec. 1944[1]	Dec. 1943	Dec. 1944[1]	Dec. 1943	Dec. 1944[1]	Dec. 1943
50 cities, composite: All types of gas										95.3	[2] 96.7	80.3	[2] 81.6
Manufactured gas													
New England:													
Boston—													
Company 1	532	$2.85	$2.84	$4.25	$4.24	$5.97	$5.95	$7.53	$7.50	115.7	115.6	85.8	85.7
Company 2	535	2.38	2.42	4.39	4.47	5.91	6.03	7.50	7.65				
Fall River	528	3.04	3.10	4.69	4.80	6.72	6.89	8.55	8.78	131.5	134.1	100.7	103.3
Manchester	525	3.25	3.23	4.91	4.88	6.57	6.53	8.05	7.99	117.8	117.2	87.9	87.3
New Haven	528	2.41	2.41	4.11	4.11	6.20	6.20	8.09	8.09	97.4	97.4	97.0	97.0
Portland, Maine	525	3.38	3.36	5.60	5.56	6.83	6.77	8.45	8.37	107.8	107.2	77.2	76.5
Providence	510	2.65	2.65	4.28	4.28	6.28	6.28	8.10	8.10	99.7	99.7	93.4	93.4
Middle Atlantic:													
Newark	525	2.69	2.69	4.31	4.31	6.06	6.06	7.29	7.29	109.0	109.0	85.1	85.1
New York [3]													
Bronx	540	2.28	2.28	4.22	4.22	6.59	6.59	8.73	8.73				
Brooklyn—													
Company 1	540	2.32	2.32	3.76	3.76	5.20	5.20	6.36	6.36				
Company 2	540	2.41	2.41	3.88	3.88	5.32	5.32	6.63	6.63				
Company 4	540	2.62	2.56	4.31	4.20	6.02	5.84	7.28	7.05	100.3	100.2	88.9	88.8
Manhattan	540	2.28	2.28	4.22	4.22	6.59	6.59	8.73	8.73				
Queens	540	2.28	2.28	4.22	4.22	6.59	6.59	8.73	8.73				
Richmond	540	3.07	3.07	5.05	5.05	7.01	7.01	8.78	8.78				
Philadelphia	530	1.86	1.86	3.27	3.27	4.82	4.82	6.24	6.24	92.8	92.8	83.6	83.6
Rochester	537	2.26	2.26	3.99	3.99	5.35	5.35	6.88	6.88	114.0	114.0	93.1	93.1
Scranton	520	2.89	2.89	4.57	4.57	5.77	5.77	7.60	7.60	96.0	96.0	72.2	72.2
E. N. Central:													
Indianapolis	570	1.58	1.58	2.92	2.92	4.57	4.57	6.05	6.05	75.3	75.3	75.3	75.3
Milwaukee	520	1.76	1.76	2.89	2.89	4.26	4.26	5.51	5.51	101.0	101.0	91.4	91.4
W. N. Central:													
Omaha	600	1.38	1.38	2.14	2.14	3.05	3.05	3.88	3.88	62.1	62.1	5.05	50.5
St. Paul	550	1.98	1.98	3.16	3.16	4.59	4.59	5.87	5.87	125.4	125.4	100.7	100.7
South Atlantic:													
Baltimore	500	1.80	1.80	3.33	3.33	4.78	4.78	6.08	6.08	98.6	98.6	98.7	98.7
Charleston, S. C.—													
B-1 [4]	550	2.70	[5] 2.70		[5] 4.98		[5] 7.19		[5] 9.01	89.4	[5] 89.4		[5] 82.3
B-2	550	2.95	[5] 2.70	4.42	[6] 4.42	5.92	[6] 5.92	7.28	[6] 7.28	97.6	[5] 89.4	67.8	[6] 67.8
Jacksonville	525	4.03	4.03	5.80	5.80	7.69	7.69	9.40	9.40	103.3	103.3	74.2	74.2
Norfolk	530	2.40	2.40	4.36	4.36	6.62	6.62	8.51	8.51	94.5	94.5	90.9	90.9
Richmond	530	2.60	2.60	4.74	4.74	5.99	5.99	7.69	7.69	102.8	102.8	82.2	82.2
Savannah	535	2.48	2.48	4.58	4.58	7.15	7.15	9.49	9.49	92.7	92.7	92.7	92.7
E. S. Central:													
Birmingham	520	1.62	[5] 1.63	2.66	[5] 2.69	3.75	[6] 3.78	4.52	[5] 4.55	101.5	[5] 101.9	81.3	[6] 81.8
Immediate	520	------	1.63	------	2.93	------	4.47	------	5.82	------	101.9	------	96.8
Pacific:													
Portland, Oreg	570	2.34	2.34	3.98	3.98	5.33	5.33	6.61	6.61	101.0	101.0	90.2	90.2
Seattle [7]	500	3.33	3.33	5.74	5.74	5.62	5.62	6.86	6.86	105.4	105.4	69.6	69.6
Natural gas													
Middle Atlantic:													
Pittsburgh—													
Company 1	1,115	[8] $1.00	[8] $1.00	$1.06	$1.06	$1.64	$1.64	$2.18	$2.18	104.0	108.6	119.7	122.8
Company 2	1,100	1.18	1.39	1.72	1.93	2.37	2.58	2.96	3.17				
Company 3	1,100	1.18	1.39	1.72	1.93	2.37	2.58	2.96	3.17				
E. N. Central:													
Cleveland	1,100	[8] .90	[8] .89	1.33	[9] 1.32	1.88	[9] 1.87	2.38	[9] 2.37	97.7	[9] 96.6	109.9	[9] 109.4
Columbus	1,050	.90	.90	1.34	1.34	1.86	1.86	2.34	2.34	171.2	171.2	134.2	134.2
Detroit [7]	1,014	[10] 1.07	1.54	[10] 1.81	2.62	[10] 2.73	3.95	[10] 3.56	5.15	[10] 68.1	98.8	[10] 62.1	89.9
Peoria	1,000	2.12	2.12	3.64	3.64	4.67	4.67	5.57	5.57	94.0	94.0	71.9	71.9
Springfield	1,000	1.91	1.91	3.36	3.36	4.47	4.47	5.37	5.37	75.0	75.0	61.0	61.0
W. N. Central:													
Kansas City [11]	1,040	1.33	1.33	2.12	2.12	3.05	3.05	3.88	3.88	97.5	97.5	98.5	98.5

See footnotes at end of table.

TABLE 2.—*Net Monthly Bills and Index Numbers for Specified Amounts of Gas, by City, Based on Rates as of December 15, 1943 and 1944*—Continued

Region and city	Heating value per cubic foot in British thermal units (as of Dec. 1944)	Net monthly bills for—								Index numbers (1923–25=100) for consumption of—			
		10.6 therms		19.6 therms		30.6 therms		40.6 therms		10.6 therms		30.6 therms	
		Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943
Natural gas—Continued													
South Atlantic:													
Atlanta	980	$1.70	$1.70	$2.62	$2.62	$3.69	$3.69	$4.30	$4.30	58.7	58.7	44.1	44.1
E. S. Central:													
Memphis	980	1.39	1.39	2.26	2.26	3.27	3.27	3.83	3.83	57.2	57.2	46.8	46.8
Mobile	1,064	1.60	1.70	2.31	2.54	3.19	3.58	3.70	4.15	43.9	46.8	30.4	34.1
W. S. Central:													
Dallas	1,050	1.26	1.26	1.77	1.77	2.40	2.40	2.93	2.93	157.4	157.4	111.6	111.6
Houston—													
Company 1	1,100	.92	.92	1.41	1.41	2.01	2.01	2.55	2.55				
Company 2	1,081	.93	.93	1.43	1.43	2.04	2.04	2.60	2.60	42.4	42.5	32.2	32.3
Company 3	1,092	.86	.90	1.31	1.38	1.87	1.96	2.38	2.50				
Little Rock [11]	1,000	1.05	1.95	1.46	1.46	1.97	1.97	2.42	2.42	98.0	98.0	95.9	95.9
New Orleans	1,066	1.10	1.11	1.70	1.71	2.42	2.44	3.08	3.10	47.9	48.2	36.5	36.8
Mountain:													
Butte	850	1.11	1.11	1.59	1.59	2.17	2.17	2.70	2.70	26.2	26.2	18.4	18.4
Denver [11]	840	2.15	2.15	3.31	3.31	4.16	4.16	4.80	4.80	71.8	71.8	48.0	48.0
Salt Lake City [11]	875	2.09	2.09	3.24	3.24	4.13	4.13	4.83	4.83	56.8	56.8	43.2	43.2
Pacific:													
Los Angeles	1,100	1.18	1.18	1.66	1.66	2.20	2.20	2.67	2.67	137.7	137.7	88.8	88.8
San Francisco	1,100	1.00	1.00	1.38	1.38	1.83	1.83	2.21	2.21	53.0	53.0	33.5	33.5
Mixed manufactured and natural gas													
Middle Atlantic:													
Buffalo	900	$0.77	$0.77	$1.42	$1.42	$2.21	$2.21	$2.93	$2.93	107.1	107.1	107.1	107.1
E. N. Central:													
Chicago	800	1.85	1.85	2.93	2.93	3.72	3.72	4.42	4.42	86.8	86.8	64.8	64.8
Cincinnati	1,000	.79	.79	1.42	1.42	2.14	2.14	2.79	2.79	100.5	100.5	126.2	126.2
W. N. Central:													
Minneapolis	800	1.65	1.70	2.34	2.44	3.15	3.32	3.84	4.07	94.6	97.3	62.6	66.0
St. Louis [11]	800	2.04	2.04	3.20	3.20	4.38	4.38	5.45	5.45	115.5	115.5	85.9	85.9
South Atlantic:													
Washington, D. C.	604	1.51	1.51	2.65	2.65	3.96	3.96	5.08	5.08	84.3	84.3	76.7	76.7
E. S. Central:													
Louisville [7]	900	1.14	1.14	1.79	1.79	2.48	2.48	3.08	3.08	163.3	163.3	164.5	164.5

[1] Preliminary.
[2] Revised from 97.1 and 81.7 for 10.6 and 30.6 therms, respectively.
[3] Bills include 1-percent sales tax.
[4] Alternative rate B-1 (the former "Immediate rate") is applicable only to the customers who consumed 10.6 therms in December 1943.
[5] Bills and indexes based on "Immediate rate" which was effective in December 1943. The "Objective rate" for that month was not applicable to customers using only 10.6 therms, since the charge under it for 10.6 therms would have been more than the Immediate rate charge.
[6] Bills and indexes based on the "Objective rate" applicable in December 1943 to users of more than 10.6 therms. The Objective rate is intended to result in greater gas consumption.
[7] Bills include 3-percent sales tax.
[8] Minimum bill—for a quantity in excess of 10.6 therms.
[9] Revised according to order dated November 20, 1944, retroactive to July 1, 1942. Before revision, December 1943 bills were: 10.6 therms, $1.11; 19.6 therms, $1.56; 30.6 therms, $2.11; 40.6 therms, $2.61; and December 1943 indexes were: 10.6 therms, 120.3; and 30.6 therms, 123.4.
[10] Bills and indexes shown are after adjustment for 31-percent special discount for December 1944. Bills and indexes for January 1945 are to be the same as those for November 1944, unchanged from December 1943.
[11] Bills include 2-percent sales tax.

The decline in composite indexes between December 1943 and December 1944 was largely temporary and attributable to decreases in Detroit gas rates ordered for the month of December 1944.

In the New England region, the operation of fuel-adjustment clauses in gas-rate schedules caused minor fluctuations throughout the year. In New York City an additional charge of 3 cents per thousand cubic feet was granted to one company, to cover operation costs, for the 12 months beginning December 1, 1944. The regular

summer reduction in rates of another company in that city caused the usual seasonal decline in the 50-city index.

Among the natural-gas companies, two offered customers gas having a greater heating value per cubic foot. Bills for one of the three Houston companies were reduced twice during the year for this reason, 3 percent in the second quarter and about 2 percent in the fourth quarter. In New Orleans a 1-percent increase in the heating value of the gas occurred between March and June, the fifth such increase in that city since 1939.

Most domestic gas consumers in Cleveland received checks in December to cover refunds based on new rates ordered by the Ohio Public Service Commission on November 20. The new rates, retroactive to July 1, 1942, and effective through November 20, 1944, in substance gave all consumers an additional 600 cubic feet of gas for 9 cents by altering the terms of the minimum charge. After November 20, by the order, the rate for the first thousand cubic feet consumed was to be 1 cent more, and all bills for December 1944, shown in table 2, reflected this change. In both tables 2 and 3, the bills quoted for the first 3 quarters of 1944 are revised to accord with the rate order in November; unrevised bills for the period are shown in footnote 6 in table 3.

As ordered by the Michigan Public Utilities Commission, Detroit consumers received a 31-percent discount on their December bills. Rates in January 1945 were to be the same as in November. The order resulted from considerable local agitation to reduce the utility's net income for 1944, and since making this discount the utility company has reported a net income for 1944 about 23 percent below that for 1943.

At the close of the year, both Charleston (S. C.) and Birmingham had simplified their rate structure by replacing former Immediate and Objective rates with a uniform rate to conform to the lower level of the Objective rate. In Charleston, those small consumers whose bills under the Objective rate would be appreciably higher were allowed a special rate (B–1), while new customers in the small-consumer class were not given this privilege and will be billed about 10 percent more.

Since the need of gas by domestic consumers is paramount and since no feasible method of rationing this form of consumption has been evolved, the supply shortages which afflicted gas companies, like other fuel dealers, during the winter months could be met only by pleading with domestic consumers to save gas voluntarily and by refusing additional service to industry. Finally, the flow of gas to industrial customers was reduced, affecting for short periods even producers of war material. A new gas line from Texas to the Appalachian area brought some relief. An experiment by the utility in Cleveland, to accumulate gas under pressure during the summer to meet its winter demand, resulted in an explosion, with considerable loss of life and damage to property.

In table 3 net bills for specified amounts of gas are shown, by quarters, for those cities in which changes occurred during 1944. Table 4 gives indexes for the same periods for 10.6 and 30.6 therms of gas.

TABLE 3.—*Quarterly Changes in Net Monthly Bills for Specified Amounts of Gas, by City, December 15, 1943–December 15, 1944*

Heating value per cubic

TABLE 3.—*Quarterly Changes in Net Monthly Bills for Specified Amounts of Gas, by City, December 15, 1943–December 15, 1944*

Region and city	Heating value per cubic foot in British thermal units					Net monthly bills, based on rates as of the 15th of the month																				
						10.6 therms					19.6 therms					30.6 therms					40.6 therms				
	1944				1943	1944				1943	1944				1943	1944				1943	1944				1943
	Dec. 15	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15
Manufactured gas																									
New England:																									
Boston—																									
Company 1	532	532	532	532	535	$2.85	$2.85	$2.85	$2.85	$2.84	$4.25	$4.25	$4.25	$4.25	$4.24	$5.97	$5.97	$5.97	$5.97	$5.95	$7.53	$7.53	$7.53	$7.53	$7.50
Company 2	535	535	535	535	535	2.38	2.42	2.38	2.40	2.42	4.39	4.47	4.39	4.43	4.47	5.91	6.03	5.91	5.97	6.03	7.50	7.65	7.50	7.58	7.65
Fall River	528	528	528	528	528	3.04	3.00	3.04	3.04	3.10	4.69	4.62	4.69	4.69	4.80	6.72	6.60	6.72	6.72	6.89	8.55	8.40	8.55	8.55	8.78
Manchester	525	525	525	525	525	3.25	3.24	3.24	3.23	3.23	4.91	4.91	4.91	4.88	4.88	6.57	6.57	6.56	6.53	6.53	8.05	8.04	8.04	7.99	7.99
Portland, Maine	525	525	525	525	525	3.38	3.36	3.40	3.36	3.36	5.60	5.56	5.64	5.56	5.56	6.83	6.77	6.89	6.77	6.77	8.45	8.37	8.52	8.37	8.37
Middle Atlantic:																									
New York [2]—																									
Company 1	540	540	540	540	540	2.28	2.28	2.28	2.28	2.28	4.22	3.96	3.96	4.22	4.22	6.59	5.51	5.51	6.59	6.59	8.73	6.91	6.91	8.73	8.73
Company 4	540	540	540	540	540	2.62	2.56	2.56	2.56	2.56	4.31	4.20	4.20	4.20	4.20	6.02	5.84	5.84	5.84	5.84	7.28	7.05	7.05	705	7.05
South Atlantic:																									
Charleston, S. C.—																									
Rate B–1	550	550	550	550	550	2.70	2.70	2.70	2.70	[3] 2.70	(4)	(4)	(4)	(4)	[3] 4.98	(4)	(4)	(4)	(4)	[3] 7.19	(4)	(4)	(4)	(4)	[3] 9.01
Rate B–2	550	550	550	550	550	2.95	2.95	2.95	2.95	(5)	4.42	4.42	4.42	4.42	[5] 4.42	5.92	5.92	5.92	5.92	[5] 5.92	7.28	7.28	7.28	7.28	[5] 7.28
Birmingham	520	520	520	520	520	1.62	1.62				2.66	2.66				3.75	3.75				4.52	4.52			
Immediate			520	520	520			1.63	1.63	1.63			2.93	2.93	2.93			4.47	4.47	4.47			5.82	5.82	5.82
Objective			520	520	520			(3)	(3)	(3)			2.69	2.69	2.69			3.78	3.78	3.78			4.55	4.55	4.55
Natural gas																									
Middle Atlantic:																									
Pittsburgh—																									
Company 2	1,100	1,100	1,100	1,100	1,100	1.18	1.18	1.39	1.39	1.39	1.72	1.72	1.93	1.93	1.93	2.37	2.37	2.58	2.58	2.58	2.96	2.96	3.17	3.17	3.17
Company 3	1,100	1,100	1,100	1,100	1,100	1.18	1.18	1.18	1.18	1.39	1.72	1.72	1.72	1.72	1.93	2.37	2.37	2.37	2.37	2.58	2.96	2.96	2.96	2.96	3.17
East North Central:																									
Cleveland [6]	1,100	1,100	1,100	1,100	1,100	[7].90	.89	.89	.89	.89	1.33	1.32	1.32	1.32	1.32	1.88	1.87	1.87	1.87	1.87	2.38	2.37	2.37	2.37	2.37
Detroit [8]	1,014	1,014	1,014	1,014	1,014	[9] 1.07	1.54	1.54	1.54	[9] 1.54	[9] 1.81	2.62	2.62	2.62	2.62	[9] 2.73	3.95	3.95	3.95	3.95	[9] 3.56	5.15	5.15	5.15	5.15
East South Central: Mobile	1,064	1,064	1,064	1,064	1,064	1.60	1.60	1.70	1.70	1.70	2.31	2.31	2.54	2.54	2.54	3.19	3.19	3.58	3.58	3.58	3.70	3.70	4.15	4.15	4.15

See footnotes at end of table.

631928—45——18

TABLE 3.—*Quarterly Changes in Net Monthly Bills for Specified Amounts of Gas, by City, December 15, 1943–December 15, 1944*—Continued

Region and city	Heating value per cubic foot in British thermal units					Net monthly bills, based on rates as of the 15th of the month																			
	1944				1943	10.6 therms					19.6 therms					30.6 therms					40.6 therms				
						1944				1943	1944				1943	1944				1943	1944				1943
	Dec. 15	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15[1]	Sept. 15	June 15	Mar. 15	Dec. 15
Natural gas—Continued																									
West South Central:																									
Houston—Company 3	1,092	1,071	1,071	1,030	1,030	$0.86	$0.87	$0.87	$0.90	$0.90	$1.31	$1.34	$1.34	$1.38	$1.38	$1.87	$1.90	$1.90	$1.96	$1.96	$2.38	$2.41	$2.41	$2.50	$2.50
New Orleans	1,066	1,066	1,066	1,055	1,055	1.10	1.10	1.10	1.11	1.11	1.70	1.70	1.70	1.71	1.71	2.42	2.42	2.42	2.44	2.44	3.08	3.08	3.08	3.10	3.10
Mixed manufactured and natural gas																									
West North Central:																									
Minneapolis	800	800	800	800	800	1.65	1.65	1.70	1.70	1.70	2.34	2.34	2.44	2.44	2.44	3.15	3.15	3.32	3.32	3.32	3.84	3.84	4.07	4.07	4.07

[1] Preliminary.
[2] Bills include a 1-percent sales tax.
[3] Bills and indexes based on "Immediate rate" which was effective in December 1943. The "Objective rate" for that month was not applicable to customers using only 10.6 therms, since the charge under it for 10.6 therms would have been more than the Immediate rate charge.
[4] Alternative rate B–1 (the former "Immediate rate") is applicable only to the customers who consumed 10.6 therms in December 1943.
[5] Bills and indexes based on the "Objective rate" applicable in December 1943 to users of more than 10.6 therms. The Objective rate is intended to result in greater gas consumption.
[6] December 1943 and March, June, and September 1944 bills revised according to order dated November 20, 1944, retroactive to July 1, 1942. Before revision the bills were: 10.6 therms, $1.11; 19.6 therms, $1.56; 30.6 therms, $2.11; 40.6 therms, $2.61; and the indexes were: 10.6 therms, 120.3; and 30.6 therms, 123.4.
[7] Minimum bill—for a quantity in excess of 10.6 therms.
[8] Bills include a 3-percent sales tax.
[9] Bills and indexes shown are after adjustment for 31-percent special discount for December 1944 Bills and indexes for January 1945 are to be the same as those for November 1944, unchanged from December 1943.

TABLE 4.—*Index Numbers of Net Monthly Bills for 10.6 and 30.6 Therms of Gas, for Specified Cities, by Quarters, December 15, 1943–December 15, 1944*

Region and city	Index numbers (1923–25=100) of net monthly bills for—									
	10.6 therms					30.6 therms				
	1944				1943	1944				1943
	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15
50 cities combined	95.3	96.6	96.6	96.6	96.7	80.3	78.9	79.0	81.6	81.6
Manufactured gas—24 cities	101.8	101.7	101.7	101.7	101.7	88.5	84.3	84.4	88.5	88.5
New England:										
Boston	115.7	115.9	115.7	115.8	115.6	85.8	86.0	85.8	85.9	85.7
Fall River	131.5	129.8	131.5	131.5	134.1	100.7	99.0	100.7	100.7	103.3
Manchester	117.8	117.7	117.6	117.2	117.2	87.9	87.8	87.8	87.3	87.3
Portland, Maine	107.8	107.2	108.5	107.2	107.2	77.2	76.5	77.8	76.5	76.5
Middle Atlantic:										
New York [2]	100.3	100.2	100.2	100.2	100.2	88.9	80.8	80.8	88.8	88.8
South Atlantic:										
Charleston, S. C.—										
Rate B-1	89.4	89.4	89.4	89.4	[3] 89.4	(4)	(4)	(4)	(4)	[3] 82.3
Rate B-2	97.6	97.6	97.6	97.6	[3] 89.4	67.8	67.8	67.8	67.8	[3] 67.8
Birmingham	101.5	101.5				81.3	81.3			
Immediate	----	----	101.9	101.9	101.9	----	----	96.8	96.8	96.8
Objective	----	----	(3)	(3)	(3)	----	----	81.8	81.8	81.8
Natural gas—19 cities	101.3	109.3	109.5	109.6	109.8	88.5	97.1	97.2	97.3	97.4
Middle Atlantic:										
Pittsburgh—	104.0	104.0	106.0	106.0	108.6	119.7	119.7	121.1	121.1	122.8
East North Central:										
Cleveland [5]	97.7	96.6	96.6	96.6	96 6	109.9	109.4	109.4	109.4	109.4
Detroit [5]	[6] 68.1	98.8	98.8	98.8	98.8	[6] 62.1	89.9	89.9	89.9	89.9
East South Central: Mobile	43.9	43.9	46.8	46.8	46.8	30.4	30.4	34.1	34.1	34.1
West South Central:										
Houston	42.4	42.4	42.4	42.5	42.5	32.2	32.2	32.2	32.3	32.3
New Orleans	47.9	47.9	47.9	48.2	48.2	36.5	36.5	36.5	36.8	36.8
Mixed manufactured and natural gas—7 cities	94.6	94.6	94.8	94.8	94.8	77.7	77.7	77.9	77.9	77.9
West North Central: Minneapolis	94.6	94.6	97.3	97.3	97.3	62.6	62.6	66.0	66.0	66.0

See footnotes to table 3.

Prices of Electricity

The most substantial rate reductions to which electric utilities were subject during the year were only temporary. Such changes as were made in electric bills during 1944 had but little effect on the composite indexes for 51 cities. Table 5 shows net monthly bills and index numbers for December 1943 and 1944 for each of the 51 cities.

TABLE 5.—*Net Monthly Bills and Index Numbers for Specified Kilowatt-Hours of Electricity, by City, Based on Rates as of December 15, 1943 and 1944*

Region and city	Net monthly bills for—						Indexes (1923–25=100) for consumption of—			
	25 kwh		100 kwh		250 kwh		25 kwh		100 kwh	
	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943
51 cities combined	----	----	----	----	----	----	71.3	72.0	63.4	64.0
New England:										
Boston	$1.55	$1.55	$4.90	$4.90	$9.40	$9.40	66.4	66.4	78.4	78.4
Bridgeport	1.31	1.31	3.88	3.88	6.88	6.88	75.0	75.0	55.4	55.4
Fall River	1.42	1.50	4.81	4.90	8.91	9.05	62.8	66.4	55.3	56.3
Manchester	2.00	2.00	5.00	5.00	8.00	8.00	66.7	66.7	74.1	74.1
New Haven	1.31	1.31	3.88	3.88	6.88	6.88	75.0	75.0	55.4	55.4
Portland, Maine	1.85	1.85	4.70	4.70	7.70	7.70	92.5	92.5	73.0	73.0
Providence	1.64	1.64	4.82	4.82	9.07	9.07	73.4	73.4	64.8	64.8

See footnotes at end of table.

TABLE 5.—*Net Monthly Bills and Index Numbers for Specified Kilowatt-Hours of Electricity, by City, Based on Rates as of December 15, 1943 and 1944*—Continued

Region and city	Net monthly bills for—						Indexes (1923–25=100) for consumption of—			
	25 kwh		100 kwh		250 kwh		25 kwh		100 kwh	
	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943	Dec. 1944 [1]	Dec. 1943
Middle Atlantic:										
Buffalo	$1.13	$1.13	$3.06	$3.06	$5.31	$5.31	90.1	90.1	91.6	91.6
Newark	1.65	1.70	4.15	4.35	8.15	8.60	74.3	76.5	60.5	63.4
New York [2]							79.8	[3] 79.5	58.7	[3] 58.4
Bronx, Company 1	1.70	1.69	4.87	4.83	8.33	8.24				
Brooklyn, Company 1	1.70	1.69	4.87	4.83	8.33	8.24				
Manhattan, Company 1	1.70	1.69	4.87	4.83	8.33	8.24				
Queens—										
Company 1	1.70	1.69	4.87	4.83	8.33	8.24				
Company 2	1.58	1.58	4.72	4.72	8.76	8.76				
Richmond, Company 3	1.38	[3] 1.38	3.76	[3] 3.74	6.73	[3] 6.68				
Philadelphia	1.37	1.37	3.37	3.37	5.85	5.85	73.5	73.5	56.8	56.8
Pittsburgh	1.25	1.25	3.80	3.80	6.35	6.35	74.8	74.8	91.4	91.4
Rochester	1.48	1.48	4.11	4.11	7.41	7.41	74.3	74.3	74.7	74.7
Scranton	1.25	1.25	3.85	3.85	7.10	7.10	50.0	50.0	47.8	47.8
East North Central:										
Chicago	1.34	1.34	3.65	3.65	6.65	6.65	80.5	80.5	88.0	88.0
Cincinnati	1.00	1.00	2.50	2.50	4.75	4.75	51.9	51.9	53.2	53.2
Cleveland	1.00	1.00	3.35	3.35	6.72	6.72	82.1	82.1	69.6	69.6
	.80	.80	2.65	2.65	5.40	5.40				
Columbus [4]	1.18	1.12	4.41	4.20	7.88	7.50	68.1	64.8	63.3	60.3
	1.02	.98	3.57	3.40	6.56	6.25				
Detroit [5]	1.30	1.30	3.38	3.38	6.86	6.86	83.9	83.9	79.7	79.7
Indianapolis	1.25	1.25	3.85	3.85	6.95	6.95	72.3	72.3	57.7	57.7
Milwaukee	1.35	1.41	3.22	3.35	6.10	6.23	76.3	79.9	77.9	81.0
Peoria	1.25	1.25	3.12	3.12	5.75	5.75	65.1	65.1	73.4	73.4
Springfield	1.25	1.25	3.02	3.02	5.22	5.22	83.3	83.3	77.4	77.4
	1.25	1.25	3.02	3.02	4.80	4.80				
West North Central:										
Kansas City [6]	1.28	1.28	3.83	3.83	7.65	7.65	68.3	68.3	80.4	80.4
Minneapolis	1.19	1.19	3.56	3.56	6.65	6.65	55.5	55.5	79.3	79.3
Omaha	1.02	1.02	3.64	3.64	7.42	7.42	74.2	74.2	66.2	66.2
St. Louis [6]	1.21	1.21	3.20	3.20	6.35	6.35	71.7	71.7	87.7	87.7
	1.09	1.09	2.91	2.91	5.81	5.81				
St. Paul	1.25	1.25	3.75	3.75	7.00	7.00	50.5	50.5	49.5	49.5
South Atlantic:										
Atlanta [7]		1.22		3.50		6.12		60.4		54.0
Baltimore	1.06	1.06	3.78	3.78	7.68	7.68	53.2	53.2	66.0	66.0
Charleston, S. C	1.45	1.45	3.93	3.93	6.67	6.67	58.0	58.0	41.3	41.3
Jacksonville	1.50	1.50	4.60	4.60	7.60	7.60	85.7	85.7	65.7	65.7
Norfolk	1.35	1.25	4.35	4.25	8.60	7.50	60.0	55.6	69.0	67.5
Richmond	1.35	1.25	4.35	4.25	8.60	7.50	60.0	55.6	69.0	67.5
Savannah	1.22	1.45	3.90	4.20	6.65	6.95	54.4	64.4	65.0	70.0
Washington, D. C	.98	.98	2.51	2.51	4.87	4.87	42.5	42.5	29.6	29.6
East South Central:										
Birmingham	.81	.81	2.75	2.75	6.13	6.13	42.5	42.5	51.9	51.9
Louisville [8]	.90	.90	3.09	3.09	6.18	6.18	47.4	47.4	70.6	70.6
Memphis	.75	.75	2.50	2.50	5.00	5.00	37.5	37.5	42.4	42.4
Mobile	1.20	1.20	3.50	3.50	6.00	6.00	53.3	53.3	40.9	40.9
West South Central:										
Dallas [9]	.96	1.06	3.26	3.92	6.19	7.54	63.9	70.9	54.4	65.4
Houston [9]	.93	.96	3.09	3.22	5.85	5.98	66.2	68.0	63.0	65.6
Little Rock [10]	1.40	1.51	3.82	4.18	7.52	8.26	56.1	60.2	42.2	46.1
New Orleans	1.50	1.50	4.40	4.40	8.10	8.10	61.0	61.0	57.4	57.4
Mountain:										
Butte	1.20	1.34	3.83	4.11	7.08	7.61	58.4	64.7	71.8	77.1
Denver [10]	1.28	1.28	3.88	3.88	6.94	6.94	63.8	63.8	49.2	49.2
Salt Lake City [10]	.89	1.38	3.16	3.83	6.48	7.14	44.1	68.0	40.9	49.4
Pacific:										
Los Angeles	1.03	1.03	2.86	2.86	4.98	4.98	72.0	72.0	50.4	50.4
Portland, Oreg	.88	.88	3.00	3.00	5.30	5.30	56.2	56.2	88.0	88.0
	.88	.88	3.00	3.00	5.30	5.30				
San Francisco	1.15	1.15	2.92	2.92	5.42	5.42	63.9	63.9	50.3	50.3
Seattle	.80	.88	2.72	2.95	5.10	5.20	56.8	62.1	77.8	84.4
	.80	.88	2.72	2.95	5.10	5.20				

[1] Preliminary. [2] Bills include 1-percent sales tax.

[3] Revised according to order dated May 1944, retroactive to August 1943. Before revision, December 1943 bills for Richmond Borough were: 25 kwh, $1.49; 100 kwh, $4.06; 250 kwh, $7.24; and December 1943 composite indexes for New York City were: 25 kwh, 79.6; and 100 kwh, 58.5.

[4] Bills for June and subsequent periods include a utilities commodity tax of 5 percent effective April 1, 1944.

[5] Bills include 3-percent sales tax and free lamp-renewal service.

[6] Bills include 2-percent sales tax and free lamp-renewal service.

[7] Bills and indexes shown reflect 100-percent special discount for December 1944. Bills and indexes for January 1945 are to be the same as those for November 1944, unchanged from December 1943.

[8] Bills include 3-percent sales tax. [9] Bills include ½ of 1 percent defense tax.

[10] Bills include 2-percent sales tax.

Atlanta customers received a 100-percent discount on their December bills, and Portland (Oreg.) customers of both local electric utilities received an 86-percent discount on their June bills. In both cities rates in the following month were the same as in the month preceding these reductions.

Reductions of approximately 5 percent in Newark, N. J., and 7 percent in Little Rock, Ark., applied to many customers beyond the boundaries of these cities. The total amount of the reduction by the Newark utility has been estimated at $5,000,000 annually, of which a little over a third will accrue to residential consumers.

During the second quarter, rates declined about 9 percent in Seattle, and at the close of the year, the utility in Salt Lake City put into effect rates almost 20 percent below those previously prevailing.

Although revenue resulting from the enormously increased demand for power continued to outweigh all or most of the increased costs of electric utilities during 1944, the same demand created a problem when measured against installed generating facilities and available fuel. As the year closed, and fuel supplies became very scarce, consumers were ever more strongly urged to economize in their consumption of electricity.

In table 6 net bills and indexes are shown, by quarters, for those cities in which changes occurred during 1944.

TABLE 6.—*Quarterly Changes in Net Monthly Bills and Index Numbers for Specified Kilowatt-Hours of Electricity, by City, Dec. 1943–Dec. 1944*

Region and city	Net monthly bills, based on rates as of the 15th of the month															Indexes (1923–25=100) for consumption of—									
	25 kwh					100 kwh					250 kwh					25 kwh					100 kwh				
	1944				1943	1944				1943	1944				1943	1944				1943	1944				1943
	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15	Dec. 15 [1]	Sept. 15	June 15	Mar. 15	Dec. 15
51 cities combined																71.3	72.0	71.5	72.0	72.0	63.4	64.0	63.5	64.0	64.0
New England: Fall River	$1.42	$1.42	$1.50	$1.50	$1.50	$4.81	$4.88	$4.90	$4.90	$4.90	$8.91	$9.03	$9.05	$9.05	$9.05	62.8	62.8	66.4	66.4	66.4	55.3	56.1	56.3	56.3	56.3
Middle Atlantic:																									
Newark	1.65	1.65	1.70	1.70	1.70	4.15	4.15	4.35	4.35	4.35	8.15	8.15	8.60	8.60	8.60	74.3	74.3	76.5	76.5	76.5	60.5	60.5	63.4	63.4	63.4
New York [2]																79.9	79.9	79.8	79.8	[4] 79.5	58.9	58.9	58.7	58.7	[4] 58.4
Company 1 [3]	1.70	1.70	1.69	1.69	1.69	4.87	4.87	4.85	4.85	4.83	8.33	8.33	8.29	8.29	8.24										
Company 3 [4]	1.38	1.38	1.38	1.38	1.38	3.76	3.76	3.76	3.76	3.74	6.73	6.73	6.73	6.73	6.68										
East North Central:																									
Columbus [5]																68.1	68.1	68.1	64.8	64.8	63.3	63.3	63.3	60.3	60.3
Company 1	1.18	1.18	1.18	1.12	1.12	4.41	4.41	4.41	4.20	4.20	7.88	7.88	7.88	7.50	7.50										
Company 2	1.35	1.41	1.02	.98	.98	3.22	3.35	3.57	3.40	3.40	6.10	6.23	6.56	6.25	6.25										
Milwaukee	1.35	1.41	1.41	1.41	1.41	3.22	3.35	3.35	3.35	3.35	6.10	6.23	6.23	6.23	6.23	76.3	79.9	79.9	79.9	79.9	77.9	81.0	81.0	81.0	81.0
South Atlantic:																									
Atlanta [6]		1.22	1.22	1.22	1.22		3.50	3.50	3.50	3.50		6.12	6.12	6.12	6.12		60.4	60.4	60.4	60.4		54.0	54.0	54.0	54.0
Norfolk	1.35	1.35	1.25	1.25	1.25	4.35	4.35	4.25	4.25	4.25	8.60	8.60	7.50	7.50	7.50	60.0	60.0	55.6	55.6	55.6	69.0	69.0	67.5	67.5	67.5
Richmond	1.35	1.35	1.25	1.25	1.25	4.35	4.35	4.25	4.25	4.25	8.60	8.60	7.50	7.50	7.50	60.0	60.0	55.6	55.6	55.6	69.0	69.0	67.5	67.5	67.5
Savannah	1.22	1.22	1.22	1.45	1.45	3.90	3.90	3.90	4.20	4.20	6.65	6.65	6.65	6.95	6.95	54.4	54.4	54.4	64.4	64.4	65.0	65.0	65.0	70.0	70.0
West South Central:																									
Dallas [7]	.96	.96	.96	.96	1.06	3.26	3.26	3.26	3.26	3.92	6.19	6.19	6.19	6.19	7.54	63.9	63.9	63.9	63.9	70.9	54.4	54.4	54.4	54.4	65.4
Houston [7]	.93	.93	.93	.93	.96	3.09	3.09	3.09	3.09	3.22	5.85	5.85	5.85	5.85	5.98	66.2	66.2	66.2	66.2	68.0	63.0	63.0	63.0	63.0	65.6
Little Rock [8]	1.40	1.51	1.51	1.51	1.51	3.82	4.18	4.18	4.18	4.18	7.52	8.26	8.26	8.26	8.26	56.1	60.2	60.2	60.2	60.2	42.2	46.1	46.1	46.1	46.1
Mountain:																									
Butte	1.20	1.34	1.34	1.34	1.34	3.83	4.11	4.11	4.11	4.11	7.08	7.61	7.61	7.61	7.61	58.4	64.7	64.7	64.7	64.7	71.8	77.1	77.1	77.1	77.1
Salt Lake City [9]	.89	1.38	1.38	1.38	1.38	3.16	3.83	3.83	3.83	3.83	6.48	7.14	7.14	7.14	7.14	44.1	68.0	68.0	68.0	68.0	40.9	49.4	49.4	49.4	49.4
Pacific:																									
Portland, Oreg. [9]																56.2	56.2	7.9	56.2	56.2	88.0	88.0	12.3	88.0	88.0
Company 1	.88	.88	.12	.88	.88	3.00	3.00	.42	3.00	3.00	5.30	5.30	.74	5.30	5.30										
Company 2	.88	.88	.12	.88	.88	3.00	3.00	.42	3.00	3.00	5.30	5.30	.74	5.30	5.30										
Seattle																56.8	56.8	56.8	62.1	62.1	77.8	77.8	77.8	84.4	84.4
Company 1	.80	.80	.80	.88	.88	2.72	2.72	2.72	3.00	3.00	5.10	5.10	5.10	5.30	5.30										
Company 2	.80	.80	.80	.88	.88	2.72	2.72	2.72	2.95	2.95	5.10	5.10	5.10	5.20	5.20										

[1] Preliminary.
[2] Bills include 1-percent sales tax.
[3] Serving Boroughs of the Bronx, Brooklyn, Manhattan, and Queens.
[4] Bills for Company 3 serving Richmond Borough and composite indexes for New York City for December 1943 and March 1944 are adjusted to reflect rate order in May 1944, retroactive to August 1943.
[5] Bills include a utilities commodity tax of 5 percent effective April 1, 1944.
[6] Bills and indexes for December 1944 reflect 100-percent special discount. Bills and indexes for January 1945 are to be the same as those for November 1944, unchanged from December 1943.
[7] Bills include ¼ of 1 percent defense tax.
[8] Bills include 2-percent sales tax.
[9] Bills and indexes for June 1944 reflect an 80-percent discount given by both companies for June only.

Wholesale Prices

Wholesale Prices in January 1945

AVERAGE prices for commodities at the primary market [1] level rose 0.2 percent in January to a new wartime peak. Higher prices for agricultural commodities, largely grains and livestock, were mainly responsible for the advance. During the 12-month period ended January 1945, the index rose 1.5 percent to a point nearly 40 percent higher than in the summer of 1939 just before the outbreak of the war. Most of the rise occurred in prices for farm products and for industrial commodities in 1941 before price controls began to function, as shown in table 1.

TABLE 1.—*Percentage Changes in Wholesale Prices of Farm Products and Groups of Other Commodities, Specified Periods*

Period	Percent of change in wholesale prices of—			
	All commodities	Farm products	Foods	All commodities other than farm products and foods
January 1940 to January 1941	+1.8	+3.6	+2.8	+0.5
January 1941 to January 1942	+18.8	+40.8	+27.1	+12.2
January 1942 to January 1943	+6.1	+16.1	+12.3	+1.5
January 1943 to January 1944	+1.4	+4.1	−.3	+1.9
January 1944 to January 1945	+1.5	+3.6	−.2	+1.3

Although the all-commodity index rose to 104.9 percent of the 1926 average in January 1945, the highest point in 24 years, price changes in most instances were very moderate. Average prices for farm products rose 0.6 percent during the month; building materials, 0.3 percent; fuel and lighting materials and metals and metal products, 0.2 percent; and hides and leather products, textile products, chemicals and allied products, and housefurnishing goods, 0.1 percent. Food prices at the primary market level averaged 0.8 percent lower in January than in December.

Largely as a result of the increase in farm product prices in January, the index for raw materials rose 0.4 percent, for manufactured products 0.2 percent, and for semimanufactured articles 0.1 percent.

The increase of 0.6 percent brought farm product prices in primary markets up to the wartime peak reached in June 1943. Advances of 3.3 percent for livestock and poultry and 1.4 percent for grains were

[1] The Bureau of Labor Statistics wholesale price data for the most part represent prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.

[4] Bills for Company 3 serving Richmond Borough and composite indexes for New York City for December 1943 and March 1944 are adjusted to reflect rate order in May 1944, retroactive to August 1943. [5] Bills include a utilities commodity tax of 5 percent effective April 1, 1944 [6] Bills and indexes for December 1944 reflect 100-percent special discount. Bills and indexes for January 1945 are to be the same as those for November 1944 [7] Purchased from December 1943. [8] Bills include ¼ of 1 percent defense tax. [9] Bills include 2-percent sales tax. [10] Bills and indexes for June 1944 reflect an 80-percent discount given by both companies for June only.

in a large measure responsible for the rise. Quotations for oats rose 5.6 percent; rye, 2.5 percent; and corn and wheat, over 1 percent. A sharp increase, about 13 percent, occurred in the market for cows, when ceiling prices were established by OPA on live cattle under a directive issued by the Economic Stabilization Director. Quotations for sheep rose 8.7 percent, hogs were 2.6 percent higher, and live poultry advanced nearly 2 percent at New York and more than 3 percent at Chicago. Prices were also higher for cotton, tobacco, hay, fresh milk at Chicago and San Francisco, and for onions and potatoes. A few important farm products, such as eggs, oranges, and lemons, were seasonally lower and prices for timothy seed, Australian wool, dried beans, and apples also declined.

The seasonal declines in prices for citrus fruits and eggs brought average prices for foods in primary markets down 0.8 percent in January to the lowest point since last autumn. Higher prices were reported for fresh milk, dressed poultry, oatmeal, rye flour, onions, and potatoes.

Higher prices for goatskins and sheepskins caused the index for hides and leather products to rise 0.1 percent in January.

In the textile products group, higher prices were reported for shirting and duck, while quotations for wool crepe were revised downward effective the first of November 1944.

The increase of 0.2 percent in the fuel and lighting materials group index resulted from higher sales realizations for electricity and a correction in prices for California gasoline. Sales realizations for gas declined.

OPA action in raising prices on five basic steel products to compensate for higher costs, together with a continued advance in prices for mercury, caused the index for metals and metal products to rise 0.2 percent in January and to reach its highest point since the spring of 1925.

Wholesale prices for building materials advanced 0.3 percent in January. Substantial increases were reported in prices for brick and hollow tile as higher ceilings were permitted by OPA in certain areas. In addition, prices were somewhat higher for turpentine, sand, gravel, and lime. Nails rose nearly 6 percent as a result of increased ceiling prices. Butyl acetate declined almost 2 percent owing to lower costs of production. Minor fluctuations in prices for different types of lumber were not sufficient to change the index for lumber as a whole. Maple flooring, Ponderosa pine shop lumber, and Idaho pine boards increased slightly while sugar pine and Ponderosa pine boards declined.

An increase of 75 cents per 100 pounds in importers' ceiling prices for quebracho extract to cover increased costs in South America and higher prices for oleic acid and cottonseed meal resulted in a rise of 0.1 percent in the index for chemicals and allied products in January.

Average prices for housefurnishing goods in primary markets rose 0.1 percent because of increased ceiling prices, effective January 19, 1945, for cotton blankets at the producers' level.

In the miscellaneous commodity group, OPA action in allowing an increase of $4 per ton in manufacturers' selling prices for soda woodpulp, together with increased ceilings for boxboard sold East of the

Rocky Mountains, brought the index for paper and pulp up 0.3 percent.

In the 12-month period ended January 1945, average prices for commodities in primary markets have risen 1.5 percent, led by an advance of 3.6 percent for farm products. Livestock and poultry prices rose 8.5 percent and other farm products 1.7 percent during the year period, while grains were slightly below their year ago level.

Average prices for foods declined slightly during the year largely because of a 3.4-percent decrease in quotations for fruits and vegetables and slightly lower prices for cereal products. Dairy products and meats were fractionally higher than for January 1944.

Building materials advanced 2.9 percent between January 1944 and January 1945, with increases of over 10 percent for brick and tile, more than 4 percent for lumber and cement, and nearly 3 percent for paint and paint materials.

Textile products advanced 1.9 percent largely as a result of increased prices for cotton goods under the Economic Stabilization Extension Act of 1944.

Higher prices for coke and coal and for petroleum products caused average prices for fuel and lighting materials to rise 1.2 percent in the 12-month period ended January 1945.

Prices for paper and pulp and for other miscellaneous commodities, largely tobacco products, advanced about 1.5 percent during the year.

The indexes for metals and metal products and for hides and leather products were 0.3 percent higher in January than a year ago. Upward adjustments in ceiling prices for heating equipment, for a few basic steel products, and for certain farm machines accounted for the rise in the metals and metal products group, while higher prices for sheepskins and goatskins were responsible for the increase in the hides and leather products group index.

Prices for nearly all commodities showed broad increases over their August 1939 levels. Among the most outstanding of these were 151 percent for grains and industrial fats and oils, 133 percent for cattle feed, and 102 percent for other farm products including cotton, tobacco, milk, potatoes, onions, eggs, and other important agricultural products.

In the more than 5 years of war, prices for farm products as a group have risen nearly 107 percent and foods have advanced approximately 56 percent.

The increases in the industrial commodities groups have been substantial but somewhat smaller. Since August 1939 textile products prices have increased about 47 percent; building materials, over 30 percent; chemicals and allied products, hides and leather products, and miscellaneous commodities, between 27 and 29 percent; house-furnishing goods, 22 percent; fuel and lighting materials, nearly 15 percent; and metals and metal products, over 11 percent.

Percentage comparisons of the January 1945 level of wholesale prices with December and January 1944, and August 1939, with corresponding index numbers, are given in table 2.

TABLE 2.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, January 1945, Compared With December 1944, January 1944, and August 1939*

[1926=100]

Group and subgroup	January 1945	December 1944	Percent of change	January 1944	Percent of change	August 1939	Percent of change
All commodities	104.9	104.7	+0.2	103.3	+1.5	75.0	+39.9
Farm products	126.2	125.5	+.6	121.8	+3.6	61.0	+106.9
Grains	129.3	127.5	+1.4	129.5	−.2	51.5	+151.1
Livestock and poultry	131.1	126.9	+3.3	120.8	+8.5	66.0	+98.6
Other farm products	121.5	123.2	−1.4	119.5	+1.7	60.1	+102.2
Foods	104.7	105.5	−.8	104.9	−.2	67.2	+55.8
Dairy products	110.8	110.7	+.1	110.6	+.2	67.9	+63.2
Cereal products	94.7	94.7	0	95.1	−.4	71.9	+31.7
Fruits and vegetables	114.4	116.2	−1.5	118.4	−3.4	58.5	+95.6
Meats	106.4	106.2	+.2	106.0	+.4	73.7	+44.4
Other foods	97.3	99.7	−2.4	96.1	+1.2	60.3	+61.4
Hides and leather products	117.5	117.4	+.1	117.2	+.3	92.7	+26.8
Shoes	126.3	126.3	0	126.4	−.1	100.8	+25.3
Hides and skins	114.8	114.0	+.7	112.9	+1.7	77.2	+48.7
Leather	101.3	101.3	0	101.3	0	84.0	+20.6
Other leather products	115.2	115.2	0	115.2	0	97.1	+18.6
Textile products	99.6	99.5	+.1	97.7	+1.9	67.8	+46.9
Clothing	107.4	107.4	0	107.0	+.4	81.5	+31.8
Cotton goods	119.7	119.2	+.4	112.9	+6.0	65.5	+82.7
Hosiery and underwear	71.5	71.5	0	71.7	−.3	61.5	+16.3
Rayon	30.2	30.2	0	30.3	−.3	28.5	+6.0
Silk	(1)	(1)	.....	(1)	.....	44.3	.....
Woolen and worsted goods	112.7	112.9	−.2	112.5	+.2	75.5	+49.3
Other textile products	100.9	100.9	0	100.5	+.4	63.7	+58.4
Fuel and lighting materials	83.3	83.1	+.2	82.3	+1.2	72.6	+14.7
Anthracite	95.3	95.3	0	95.0	+.3	72.1	+32.2
Bituminous coal	120.5	120.5	0	119.8	+.6	96.0	+25.5
Coke	130.7	130.7	0	126.2	+3.6	104.2	+25.4
Electricity	(1)	(1)	.....	59.4	.....	75.8	.....
Gas	(1)	74.6	.....	76.7	.....	86.7	.....
Petroleum and products	64.3	63.8	+.8	63.5	+1.3	51.7	+24.4
Metals and metal products	104.0	103.8	+.2	103.7	+.3	93.2	+11.6
Agricultural implements	97.5	97.5	0	97.0	+.5	93.5	+4.3
Farm machinery	98.7	98.7	0	98.1	+.6	94.7	+4.2
Iron and steel	97.7	97.2	+.5	97.1	+.6	95.1	+2.7
Motor vehicles	112.8	112.8	0	112.8	0	92.5	+21.9
Nonferrous metals	85.9	85.8	+.1	85.9	0	74.6	+15.1
Plumbing and heating	92.4	92.4	0	91.8	+.7	79.3	+16.5
Building materials	116.8	116.4	+.3	113.5	+2.9	89.6	+30.4
Brick and tile	110.4	105.3	+4.8	100.2	+10.2	90.5	+22.0
Cement	97.4	97.5	−.1	93.6	+4.1	91.3	+6.7
Lumber	153.8	153.8	0	[2] 147.6	+4.2	90.1	+70.7
Paint and paint materials	106.3	106.3	0	103.5	+2.7	82.1	+29.5
Plumbing and heating	92.4	92.4	0	91.8	+.7	79.3	+16.5
Structural steel	107.3	107.3	0	107.3	0	107.3	0
Other building materials	103.5	103.3	+.2	102.8	+.7	89.5	+15.6
Chemicals and allied products	94.9	[2] 94.8	+.1	[2] 95.0	−.1	74.2	+27.9
Chemicals	95.8	95.6	+.2	96.3	−.5	83.8	+14.3
Drugs and pharmaceuticals	106.9	[2] 106.9	0	[2] 106 3	+.6	77.1	+38.7
Fertilizer materials	81.9	81.8	+.1	81.3	+.7	65.5	+25.0
Mixed fertilizers	86.6	86.6	0	86.5	+.1	73.1	+18.5
Oils and fats	102.0	102.0	0	102.0	0	40.6	+151.2
Housefurnishing goods	104.5	104.4	+.1	104.5	0	85.6	+22.1
Furnishings	107.5	107.4	+.1	107.1	+.4	90.0	+19.4
Furniture	101.5	101.5	0	102.0	−.5	81.1	+25.2
Miscellaneous	94.2	94.2	0	93.2	+1.1	73.3	+28.5
Automobile tires and tubes	73.0	73.0	0	73.0	0	60.5	+20.7
Cattle feed	159.6	159.6	0	159.6	0	68.4	+133.3
Paper and pulp	107.6	107.3	+.3	106.0	+1.5	80.0	+34.5
Rubber, crude	46.2	46.2	0	46.2	0	34.9	+32.4
Other miscellaneous	98.2	98.2	0	96.7	+1.6	81.3	+20.8
Raw materials	115.1	114.6	+.4	112.2	+2.6	66.5	+73.1
Semimanufactured articles	94.9	94.8	+.1	93.2	+1.8	74.5	+27.4
Manufactured products	101.3	101.1	+.2	100.2	+1.1	79.1	+28.1
All commodities other than farm products	100.1	100.0	+.1	99.1	+1.0	77.9	+28.5
All commodities other than farm products and foods	99.1	98.9	+.2	97.8	+1.3	80.1	+23.7

[1] Data not available.
[2] Revised.

Index Numbers by Commodity Groups, 1926 to January 1945

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1944, and by months from January 1944 to January 1945, are shown in table 3.

TABLE 3.—*Index Numbers of Wholesale Prices by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941	82.4	82.7	108.3	84.8	76.2	99.4	103.2	[1] 84.4	94.3	82.0	87.3
1942	105.9	99.6	117.7	96.9	78.5	103.8	110.2	[1] 95.5	102.4	89.7	98.8
1943	122.6	106.6	117.5	97.4	80.8	103.8	111.4	[1] 94.9	102.7	92.2	103.1
1944	123.3	104.9	116.7	98.4	83.0	103.8	115.5	[1] 95.2	104.3	93.6	104.0
1944											
January	121.8	104.9	117.2	97.7	82.3	103.7	113.5	[1] 95.0	104.5	93.2	103.3
February	122.5	104.5	116.9	97.7	83.1	103.7	113.6	[1] 95.0	104.2	93.4	103.6
March	123.6	104.6	116.9	97.8	83.0	103.7	114.2	[1] 95.0	104.3	93.5	103.8
April	123.2	104.9	116.9	97.8	83.0	103.7	115.2	[1] 95.5	104.3	93.5	103.9
May	122.9	105.0	117.0	97.8	83.2	103.7	115.7	[1] 95.5	104.3	93.5	104.0
June	125.0	106.5	116.4	97.8	83.3	103.7	115.9	[1] 95.3	104.3	93.5	104.3
July	124.1	105.8	116.2	98.0	83.2	103.7	115.9	[1] 95.5	104.3	93.6	104.1
August	122.6	104.8	116.0	98.4	83.2	103.8	116.0	[1] 95.5	104.4	93.6	103.9
September	122.7	104.2	116.0	99.2	83.0	103.8	116.0	[1] 94.9	104.4	93.6	104.0
October	123.4	104.2	116.2	99.4	82.9	103.7	116.3	[1] 95.0	104.4	93.6	104.1
November	124.4	105.1	116.2	99.4	83.1	103.7	116.4	[1] 94.8	104.4	94.0	104.4
December	125.5	105.5	117.4	99.5	83.1	103.8	116.4	[1] 94.8	104.4	94.2	104.7
1945											
January	126.2	104.7	117.5	99.6	83.3	104.0	116.8	94.9	104.5	94.2	104.

[1] Revised.

The price trend for specified years and months since 1926 is shown in table 4 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 10 and 11 of Wholesale Prices, July to December and Year 1943 (Bulletin No. 785).

TABLE 4.—*Index Numbers of Wholesale Prices by Special Groups of Commodities*

[1926=100]

Year	Raw materials	Semimanufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926	100.0	100.0	100.0	100.0	100.0
1929	97.5	93.9	94.5	93.3	91.6
1932	55.1	59.3	70.3	68.3	70.2
1933	56.5	65.4	70.5	69.0	71.2
1936	79.9	75.9	82.0	80.7	79.6
1937	84.8	85.3	87.2	86.2	85.3
1938	72.0	75.4	82.2	80.6	81.7
1939	70.2	77.0	80.4	79.5	81.3
1940	71.9	79.1	81.6	80.8	83.0
1941	83.5	86.9	89.1	88.3	89.0
1942	100.6	92.6	98.6	97.0	95.5
1943	112.1	92.9	100.1	98.7	96.9
1944	113.2	94.1	100.8	99.6	98.5
1944					
January	112.2	93.2	100.2	99.1	97.8
February	112.8	93.4	100.4	99.3	98.0
March	113.4	93.7	100.5	99.3	98.1
April	113.2	93.6	100.8	99.6	98.4
May	113.0	93.7	100.9	99.7	98.5
June	114.2	93.8	100.9	99.6	98.5
July	113.6	93.9	100.9	99.6	98.5
August	112.7	94.1	100.9	99.7	98.6
September	112.8	94.7	100.9	99.7	98.6
October	113.2	94.8	101.0	99.8	98.7
November	113.8	94.8	101.1	99.9	98.8
December	114.6	94.8	101.1	100.0	98.9
1945					
January	115.1	94.9	101.3	100.1	99.1

Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities dur- in December 1944 and January 1945 are shown by the index numbers in table 5. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 5.—*Weekly Index Numbers of Wholesale Prices by Commodity Groups, December 1944 and January 1945*

[1926=100]

Commodity group	Jan. 27, 1945	Jan. 20, 1945	Jan. 13, 1945	Jan. 6, 1945	Dec. 30, 1944	Dec. 23, 1944	Dec. 16, 1944	Dec. 9, 1944	Dec. 2, 1944
All commodities	104.7	104.8	104.7	104.6	104.7	104.6	104.4	104.2	104.2
Farm products	125.8	126.6	126.3	125.9	126.7	126.2	125.6	124.4	124.6
Foods	104.4	105.0	104.7	104.6	105.5	105.7	105.7	105.4	105.1
Hides and leather products	117.9	117.9	117.9	117.9	117.9	116.7	116.7	116.7	116.7
Textile products	99.0	99.0	99.0	99.0	99.0	99.0	98.9	98.9	98.9
Fuel and lighting materials	83.9	83.9	83.9	83.6	83.6	83.7	83.7	83.7	83.7
Metals and metal products	104.3	104.2	104.0	103.9	103.9	103.9	103.9	103.9	103.9
Building materials	116.7	116.7	116.4	116.4	116.4	116.4	116.4	116.4	116.4
Chemicals and allied products	[1] 94.9	[1] 94.9	[1] 94.9	[1] 94.9	[1] 94.8	[1] 94.8	[1] 94.8	[1] 94.8	[1] 94.8
Housefurnishing goods	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
Miscellaneous	94.0	94.0	94.0	93.9	93.9	93.9	93.9	93.9	93.7
Raw materials	115.3	115.8	115.6	115.4	115.7	115.4	115.1	114.3	114.4
Semimanufactured articles	94.8	94.8	94.7	94.7	94.7	94.7	94.7	94.7	94.7
Manufactured products	101.6	101.6	101.4	101.3	101.3	101.3	101.3	101.3	101.3
All commodities other than farm products	100.0	100.0	99.9	99.9	99.8	99.8	99.8	99.8	99.8
All commodities other than farm products and foods	99.3	99.3	99.2	99.1	99.1	99.0	99.0	99.0	99.0

[1] Revised.

Labor Turnover

Labor Turnover in Manufacturing, Mining, and Public Utilities, December 1944

FOR every 1,000 workers on factory pay rolls in December, 41 quit, 6 were discharged, 5 were laid off, and 3 left to enter the armed forces. The accession rate was about 5 percent below the level in December 1943, while the separation rate was 15 percent below that month.

A falling off in the number of quits, bringing the quit rate for all manufacturing to the lowest point in 2 years, was primarily responsible for reducing the separation rate to the lowest level since March 1942. In 19 of the 20 major manufacturing groups the quit rate was below the rate in November. The quit rate for the group of selected war industries was 39 per 1,000, slightly below that for manufacturing as a whole.

The lay-off rate for manufacturing as a whole and for most of the major groups was approximately the same as in November. The lumber group was the outstanding exception, with a lay-off rate of 23 as compared with 12 per 1,000 workers in the preceding month. The increased lay-offs in this group reflect the seasonal employment decline in the sawmill industry.

The accession rate for all manufacturing was the lowest since the attack on Pearl Harbor. Only the chemicals group reported a higher accession rate in December than in November. This higher rate in the chemicals group—60 per 1,000 workers—resulted from an accelerated production schedule in the small-arms-ammunition and explosives industries.

Following the same trend as in the manufacturing industries, separation rates in each of the metal-mining industries declined between November and December. The separation rate for metal mining was 43 per 1,000, considerably higher than the rate of 16 for anthracite mining and of 36 for bituminous-coal mining, though still below that for manufacturing. The accession rates for each of the metal-mining and coal-mining industries were below that for manufacturing. The lowest accession rate for any manufacturing, nonmanufacturing, or mining industry was reported by the anthracite mines—11 per 1,000 employees.

The total separation rate for women was considerably higher than that for men in manufacturing industries. The accession rate for women was much below the separation rate, indicating a decline in the number of women. For men the accession rate was slightly above the separation rate.

TABLE 1.—*Monthly Labor-Turnover Rates (per 100 Employees) in Manufacturing Industries* [1]

Class of turnover and year	January	February	March	April	May	June	July	August	September	October	November	December
Total separation:												
1944	6.7	6.6	7.4	6.8	7.1	7.1	6.6	7.8	7.6	6.4	6.0	[2] 5.5
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
Quit:												
1944	4.6	4.6	5.0	4.9	5.3	5.4	5.0	6.2	6.1	5.0	4.6	[2] 4.1
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
Discharge:												
1944	.7	.6	.7	.6	.6	.7	.7	.7	.6	.6	.6	[2] .6
1943	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
Lay-off: [3]												
1944	.8	.8	.9	.6	.5	.5	.5	.5	.6	.5	.5	[2] .5
1943	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
Military and miscellaneous: [4]												
1944	.6	.6	.8	.7	.7	.5	.4	.4	.3	.3	.3	[2] .3
1943	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
Accession:												
1944	6.5	5.5	5.8	5.5	6.4	7.6	6.3	6.3	6.1	6.0	6.1	[2] 4.9
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

[1] Month-to-month employment changes as indicated by labor-turnover rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month while the latter refer, for the most part, to a 1-week period ending nearest the middle of the month. In addition, labor-turnover data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to wage earners. The labor-turnover sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing and certain seasonal industries, such as canning and preserving, are not covered.

[2] Preliminary.

[3] Including temporary, indeterminate, and permanent lay-offs.

[4] Miscellaneous separations comprise not more than 0.1 in these figures. In 1939 these data were included with quits.

TABLE 2.—*Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,* [1] *December 1944* [2]

[Asterisk identifies selected war industries]

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944
Manufacturing												
Selected war industries group [3]	5.7	6.1	3.9	4.2	0.8	0.9	0.7	0.7	0.3	0.3	4.9	5.8
Ordnance	6.7	6.8	5.0	5.1	.9	.8	.6	.7	.2	.2	7.6	8.8
*Guns, howitzers, mortars, and related equipment	5.5	5.9	3.2	3.5	.6	.6	1.5	1.5	.2	.3	5.0	6.3
*Ammunition, except for small arms	7.8	7.9	6.0	6.1	1.1	1.0	.5	.6	.2	.2	9.2	10.4
*Tanks	5.6	5.8	3.7	4.2	.9	.7	.7	.6	.3	.3	5.6	7.0
*Sighting and fire-control equipment	2.3	2.4	1.6	1.8	.4	.4	.1	.1	.2	.1	2.4	3.5
Iron and steel and their products	3.9	4.5	2.8	3.4	.4	.4	.4	.4	.3	.3	3.5	4.3
*Blast furnaces, steel works, and rolling mills	2.5	3.1	2.0	2.4	.1	.2	.1	.2	.3	.3	2.6	2.9
*Gray-iron castings	7.7	7.2	6.2	5.7	.8	.9	.4	.3	.3	.3	7.5	8.3
*Malleable-iron castings	5.1	5.8	4.2	4.4	.6	.6	.1	.4	.2	.4	5.8	5.8
*Steel castings	5.8	7.0	4.3	5.5	.8	.8	.4	.4	.3	.3	5.1	7.0
*Cast-iron pipe and fittings	2.4	3.9	1.9	3.2	.3	.3	(4)	.1	.2	.3	3.0	5.9
Tin cans and other tinware	8.3	11.1	6.2	7.7	1.2	1.9	.6	1.2	.3	.3	6.3	9.0
Wire products	2.5	2.9	1.9	2.2	.2	.3	.2	.2	.2	.2	3.3	3.3
Cutlery and edge tools	4.4	6.2	3.9	5.5	.4	.5	(4)	.1	.1	.1	6.2	7.2
Tools (except edge tools, machine tools, files, and saws)	4.7	4.9	3.6	3.4	.5	.7	.2	.4	.4	.4	5.3	5.0

See footnotes at end of table.

TABLE 2.—*Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,*[1] *December 1944* [2]—Continued

[Asterisk identifies selected war industries]

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944
Iron and steel and their products—Con.												
Hardware	3.7	3.4	2.7	2.8	0.3	0.3	0.5	0.1	0.2	0.2	3.2	4.6
Stoves, oil burners, and heating equipment	6.4	8.2	4.8	6.4	.6	1.2	.7	.3	.3	.3	6.7	10.1
Steam and hot-water heating apparatus and steam fittings	4.5	4.6	3.2	3.4	.2	.3	.8	.5	.3	.4	2.9	3.8
Stamped and enameled ware and galvanizing	5.6	7.0	4.4	5.9	.7	.6	.2	.3	.3	.2	4.9	7.4
Fabricated structural-metal products	8.1	7.1	4.8	5.1	.7	.7	2.2	1.1	.4	.2	4.7	6.6
Bolts, nuts, washers, and rivets	3.8	5.0	2.2	2.8	.4	.5	.9	1.4	.3	.3	2.5	3.4
Forgings, iron and steel	3.7	4.4	2.7	3.4	.4	.5	.4	.2	.2	.3	3.3	4.0
*Firearms (60 caliber and under)	5.8	6.4	2.9	3.0	.8	.6	1.9	2.6	.2	.2	3.9	4.5
Electrical machinery	4.3	4.8	3.0	3.5	.5	.6	.5	.4	.3	.3	3.1	3.8
*Electrical equipment for industrial use	3.0	4.0	2.2	3.1	.2	.3	.4	.3	.2	.3	2.3	3.0
*Radios, radio equipment, and phonographs	5.2	5.9	3.5	4.2	.8	.9	.7	.5	.2	.3	3.7	4.5
*Communication equipment, except radios	3.9	3.7	2.7	2.9	.4	.3	.5	.2	.3	.3	2.5	3.2
Machinery, except electrical	3.5	4.0	2.4	2.8	.5	.5	.3	.4	.3	.3	3.3	4.0
*Engines and turbines	3.6	4.7	2.4	3.0	.5	.7	.4	.7	.3	.3	4.2	4.6
Agricultural machinery and tractors	4.2	4.3	3.2	3.4	.5	.4	.1	.1	.4	.4	4.4	4.7
*Machine tools	2.4	2.7	1.6	1.8	.4	.4	.2	.3	.2	.2	2.5	3.1
*Machine-tool accessories	2.7	3.8	1.8	2.3	.5	.8	.1	.4	.3	.3	2.8	2.9
*Metalworking machinery and equipment, not elsewhere classified	2.7	3.3	1.7	2.1	.5	.6	.2	.3	.3	.3	2.8	3.5
*General industrial machinery, except pumps	3.5	4.6	2.4	3.1	.5	.6	.3	.6	.3	.3	3.0	4.0
*Pumps and pumping equipment	3.4	4.2	2.8	3.3	.4	.6	(4)	(4)	.2	.3	3.1	4.6
Transportation equipment, except automobiles	6.8	7.0	4.5	4.7	1.1	1.1	.9	.9	.3	.3	5.2	6.4
*Aircraft	4.5	5.6	3.5	4.2	.5	.6	.3	.5	.2	.3	4.4	5.2
*Aircraft parts	4.9	5.6	2.6	3.2	.5	.5	1.6	1.7	.2	.2	3.9	4.1
*Shipbuilding and repairs	9.1	8.9	6.1	5.9	1.8	1.9	.9	.8	.3	.3	6.4	8.5
Automobiles	4.8	5.4	3.6	4.0	.8	.8	.2	.3	.2	.3	5.1	6.8
Motor vehicles, bodies, and trailers	4.7	4.7	3.2	3.4	.9	.6	.4	.5	.2	.2	5.0	6.4
Motor-vehicle parts and accessories	5.0	5.9	3.9	4.5	.8	.9	.1	.2	.2	.3	5.1	7.0
Nonferrous metals and their products	4.9	5.5	3.2	3.8	.6	.5	.8	.9	.3	.3	4.7	5.0
*Primary smelting and refining, except aluminum and magnesium	3.1	3.3	2.4	2.8	.2	.1	.1	.1	.4	.3	2.5	3.0
*Aluminum and magnesium smelting and refining	10.5	10.9	4.5	5.8	.5	.4	5.0	4.2	.5	.5	5.4	6.1
*Rolling and drawing of copper and copper alloys	3.7	4.5	3.0	3.5	.4	.4	.1	.4	.2	.2	3.9	4.1
*Aluminum and magnesium products	4.7	5.4	3.2	3.6	.5	.6	.7	.8	.3	.4	5.4	5.1
Lighting equipment	3.7	7.3	2.5	5.9	.8	.8	.2	.4	.2	.2	7.5	8.2
*Nonferrous-metal foundries, except aluminum and magnesium	4.7	6.3	3.6	4.7	.5	.5	.3	.8	.3	.3	4.8	6.4
Lumber and timber basic products	8.9	9.3	6.0	7.5	.3	.4	2.3	1.2	.3	.2	6.3	8.6
Sawmills	8.7	9.1	5.6	7.4	.3	.3	2.5	1.1	.3	.3	6.0	8.6
Planing and plywood mills	7.0	6.9	4.5	5.1	.4	.5	1.7	1.0	.4	.3	5.3	6.9
Furniture and finished lumber products	6.9	9.7	5.5	7.7	.4	.6	.8	1.2	.2	.2	5.6	9.2
Furniture, including mattresses and bedsprings	6.5	9.2	5.3	8.0	.5	.6	.5	.4	.2	.2	5.4	9.7
Stone, clay, and glass products	4.7	4.3	3.4	3.4	.3	.3	.7	.3	.3	.3	3.9	4.8
Glass and glass products	4.6	4.5	3.5	3.4	.4	.4	.4	.4	.3	.3	4.2	4.8
Cement	7.1	3.5	2.5	2.4	.2	.2	4.1	.6	.3	.3	2.1	3.7
Brick, tile, and terra cotta	6.1	5.1	4.8	4.1	.4	.2	.6	.4	.3	.4	5.8	4.9
Pottery and related products	4.8	4.8	4.2	4.0	.2	.2	.1	.3	.3	.3	4.7	4.9

See footnotes at end of table.

TABLE 2.—*Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,*[1] *December 1944*[2]—Continued

[Asterisk identifies selected war industries]

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944	December 1944	November 1944
Textile-mill products	5.4	5.5	4.5	4.7	0.4	0.4	0.3	0.2	0.2	0.2	4.5	5.9
Cotton	6.4	6.4	5.5	5.7	.4	.4	.2	.1	.3	.2	5.6	7.1
Silk and rayon goods	5.5	5.6	4.5	4.8	.5	.5	.2	.1	.3	.2	4.2	6.3
Woolen and worsted, except dyeing and finishing	3.6	3.8	2.3	2.8	.2	.2	.9	.5	.2	.3	2.4	3.8
Hosiery, full-fashioned	3.8	3.6	3.1	3.3	.1	.1	.5	.1	.1	.1	1.7	3.1
Hosiery, seamless	4.5	4.5	3.9	4.0	.3	.2	.2	.2	.1	.1	3.2	4.8
Knitted underwear	4.7	4.5	4.4	4.1	.2	.3	(4)	(4)	.1	.1	3.7	4.8
Dyeing and finishing textiles, including woolen and worsted	3.7	3.8	2.6	2.8	.6	.5	.2	.3	.3	.2	2.6	4.1
Apparel and other finished textile products	5.1	5.3	4.2	4.5	.2	.2	.6	.5	.1	.1	3.3	4.8
Men's and boys' suits, coats, and overcoats	4.5	3.8	3.3	3.2	.1	.1	1.0	.4	.1	.1	2.3	3.5
Men's and boys' furnishings, work clothing, and allied garments	4.7	5.7	4.2	5.1	.2	.2	.2	.3	.1	.1	2.8	4.2
Leather and leather products	4.6	4.9	4.0	4.4	.2	.2	.2	.1	.2	.2	4.2	5.4
Leather	3.3	3.7	2.6	3.0	.2	.4	.2	.1	.3	.2	3.1	4.4
Boots and shoes	4.9	5.2	4.3	4.6	.2	.2	.2	.2	.2	.2	4.4	5.6
Food and kindred products	8.3	9.1	7.3	8.1	.5	.5	.2	.2	.3	.3	8.9	10.6
Meat products	8.3	9.1	7.3	8.0	.5	.5	.2	.3	.3	.3	11.0	11.4
Grain-mill products	8.3	9.7	7.2	8.4	.6	.6	.3	.4	.2	.3	7.4	9.6
Tobacco manufactures	5.2	5.8	5.0	5.1	.1	.3	(4)	.3	.1	.1	4.3	6.2
Paper and allied products	5.6	6.1	4.7	5.2	.4	.4	.2	.2	.3	.3	5.3	7.1
Paper and pulp	5.7	5.8	4.6	5.0	.4	.3	.3	.2	.4	.3	5.3	6.9
Paper boxes	6.7	7.1	5.5	6.1	.7	.6	.2	.1	.3	.3	5.6	8.1
Chemicals and allied products	4.0	4.6	3.1	3.6	.5	.6	.2	.2	.2	.2	6.0	5.4
Paints, varnishes, and colors	3.1	3.4	2.3	2.7	.6	.5	.1	(4)	.1	.2	2.7	3.4
Rayon and allied products	3.7	3.3	3.1	2.8	.2	.2	.2	.1	.2	.2	3.2	3.5
*Industrial chemicals, except explosives	3.7	4.1	2.5	3.1	.5	.6	.4	.1	.3	.3	3.1	4.1
*Explosives	5.5	6.7	4.4	5.3	.7	.9	.1	.1	.3	.4	7.9	8.4
*Small-arms ammunition	3.7	5.1	3.0	3.6	.5	.7	.1	.7	.1	.1	11.7	6.4
Products of petroleum and coal	2.3	2.8	1.6	2.1	.2	.3	.2	.1	.3	.3	1.8	3.1
Petroleum refining	2.3	2.7	1.6	2.1	.2	.3	.2	.1	.3	.2	1.7	3.0
Rubber products	4.5	5.8	3.8	4.7	.3	.4	.1	.4	.3	.3	4.9	5.7
Rubber tires and inner tubes	4.3	5.6	3.6	4.6	.3	.3	.1	.4	.3	.3	5.2	5.8
Rubber footwear and related products	5.6	6.2	5.0	5.4	.2	.5	.1	.1	.3	.2	5.2	7.2
Miscellaneous rubber industries	4.9	5.8	4.0	4.7	.4	.4	.2	.4	.3	.3	4.4	5.2
Miscellaneous industries	3.5	4.4	2.4	3.2	.4	.5	.5	.5	.2	.2	3.0	3.9
Nonmanufacturing												
Metal mining	4.3	5.4	3.0	3.6	.4	.4	.6	1.0	.3	.4	3.4	3.9
Iron ore	3.4	4.9	1.7	2.3	.1	.1	1.2	2.0	.4	.5	1.2	1.4
Copper ore	4.6	5.3	3.7	4.2	.3	.4	.3	.2	.3	.5	4.5	5.4
Lead and zinc ore	4.5	5.3	3.4	4.4	.4	.4	.4	.1	.3	.4	4.6	5.3
Metal mining, not elsewhere classified, including aluminum ore	5.5	7.0	3.8	4.9	1.2	.8	.2	1.1	.3	.2	4.1	5.8
Coal mining:												
Anthracite mining	1.6	1.8	1.1	1.3	(4)	(4)	.3	.3	.2	.2	1.1	1.2
Bituminous-coal mining	3.6	3.6	2.9	3.1	.1	.2	.4	.1	.2	.2	2.8	3.4
Public utilities:												
Telephone	2.7	2.5	2.4	2.2	.1	.1	.1	.1	.1	.1	1.9	2.5
Telegraph	3.1	3.0	2.8	2.7	.1	.1	.1	.1	.1	.1	2.5	3.1

[1] Since January 1943 manufacturing firms reporting labor turnover have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample, comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

[2] Preliminary figures.

[3] Simple average of selected war industries, identified by * before the industry name.

[4] Less than 0.05.

TABLE 3.—*Monthly Labor-Turnover Rates (per 100 Employees)*[1] *for Men and Women in Selected Industries Engaged in War Production, December 1944*[2]

Industry group and industry	Total separation		Quit		Total accession	
	Men	Women	Men	Women	Men	Women
All manufacturing	5.0	6.7	3.5	5.4	5.1	4.8
Ordnance	5.5	8.4	3.6	6.9	7.8	7.3
Guns, howitzers, mortars, and related equipment	4.2	9.9	2.2	6.4	4.3	7.0
Ammunition, except for small arms	6.7	9.0	4.6	7.6	10.3	7.8
Tanks	4.9	5.6	2.8	4.9	5.5	6.2
Sighting and fire-control equipment	1.6	3.3	1.0	2.6	1.9	3.2
Iron and steel and their products	3.7	6.2	2.6	4.9	3.5	4.7
Blast furnaces, steel works, and rolling mills	2.4	5.1	1.8	4.4	2.5	4.5
Gray-iron castings	7.5	6.8	5.9	5.8	7.5	6.8
Malleable-iron castings	5.2	5.0	4.2	4.1	6.0	3.8
Steel castings	5.8	5.5	4.3	3.8	5.1	4.5
Cast-iron pipe and fittings	2.3	3.6	1.7	3.3	2.7	6.1
Firearms (60 caliber and under)	5.4	9.0	2.4	4.8	3.2	5.2
Electrical machinery	3.1	5.7	1.9	4.2	2.6	3.6
Electrical equipment for industrial use	2.0	4.8	1.4	3.7	1.7	3.3
Radios, radio equipment, and phonographs	3.8	6.2	2.2	4.4	3.3	3.9
Communication equipment, except radios	2.7	4.8	1.7	3.6	2.5	2.5
Machinery, except electrical	3.0	4.7	2.0	3.7	3.2	3.6
Engines and turbines	3.2	5.0	2.0	3.9	3.8	5.4
Machine tools	2.2	4.0	1.3	3.4	2.4	3.8
Machine-tool accessories	2.6	3.3	1.6	2.7	2.6	3.6
Metalworking machinery and equipment, not elsewhere classified	2.3	4.7	1.3	3.7	2.6	4.0
General industrial machinery, except pumps	3.0	4.5	2.0	3.6	2.9	3.2
Pumps and pumping equipment	2.9	5.9	2.2	5.5	2.9	4.0
Transportation equipment, except automobiles	6.3	7.9	4.0	5.7	5.3	5.0
Aircraft	3.6	6.1	2.4	5.2	4.1	4.9
Aircraft parts	3.8	7.0	2.1	3.7	3.8	4.1
Shipbuilding and repairs	9.1	12.3	5.8	8.7	6.8	6.2
Nonferrous metals and their products	4.5	5.8	3.0	4.0	4.6	5.1
Primary smelting and refining, except aluminum and magnesium	3.0	4.2	2.3	3.4	2.6	1.9
Aluminum and magnesium smelting and refining	9.7	18.0	3.7	12.8	5.6	3.7
Rolling and drawing of copper and copper alloys	3.2	5.3	2.4	4.8	3.6	5.0
Aluminum and magnesium products	4.5	5.8	3.2	3.4	5.3	5.9
Nonferrous-metal foundries, except aluminum and magnesium	4.4	5.4	3.2	4.5	4.6	5.2
Chemicals and allied products	3.6	5.1	2.6	4.3	5.8	6.6
Industrial chemicals, except explosives	3.5	4.4	2.4	3.1	3.1	3.0
Explosives	4.9	7.3	3.7	6.4	8.0	7.6
Small-arms ammunition	3.2	4.4	2.2	3.8	12.6	10.7

[1] These figures are presented to show comparative turnover rates and should not be used to estimate employment.
[2] Data are preliminary.

Building Construction in Urban Areas, January 1945

AROUND 66 million dollars worth of building construction was started in urban areas of the United States during January 1945. This was 5 percent less than in December.

Both Federal and non-Federal building declined from December, but Federal building dropped 14 percent, as compared with non-Federal building which fell off slightly more than 1 percent.

TABLE 1.—*Summary of Building Construction in All Urban Areas, January and December 1944, and January 1945*

Class of construction	Number of buildings			Value		
	January 1945	Percent of change from—		January 1945 (thousands of dollars)	Percent of change from—	
		December 1944	January 1944		December 1944	January 1944
All building construction	34,364	−4.6	−6.2	65,973	−5.2	−24.3
New residential	4,317	−41.4	−55.6	14,658	−33.1	−54.6
New nonresidential	4,846	+5.7	+43.7	27,788	+8.8	−20.1
Additions, alterations, and repairs	25,201	+4.6	+7.0	23,527	+6.2	+17.3

TABLE 2.—*Number and Value of New Dwelling Units in All Urban Areas, by Source of Funds and Type of Dwelling, January and December 1944, and January 1945*

Source of funds and type of dwelling	Number of dwelling units			Value		
	January 1945	Percent of change from—		January 1945 (thousands of dollars)	Percent of change from—	
		Dec. 1944	Jan. 1944		Dec. 1944	Jan. 1944
All dwellings	5,046	−37.3	−54.2	14,185	−34.6	−55.8
Privately financed	5,046	+1.6	−38.6	14,185	+2.7	−45.5
1-family	4,095	+3.7	−34.6	11,562	+2.4	−42.4
2-family [1]	213	−62.5	−78.2	580	−58.3	−81.1
Multifamily [2]	738	+64.7	−25.3	2,043	+80.2	−29.2
Federally financed	0	(3)	(3)	0	(3)	(3)

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.
[3] Percent of change not computed since no contract notifications were received for January 1945.

Reduced Federal activity caused a 33-percent drop in the value of new residential construction as a whole, whereas new residential construction other than Federal increased almost 5 percent in value as compared with December. New nonresidential construction in-

creased by 9 percent solely because of the rise of more than a third in new Federal building, occasioned particularly by authorizations for construction of public buildings and institutions. The month also showed an increase in the value of additions, alterations, and repairs for both non-Federal and Federal work.

The total of 5,046 new dwelling units, all privately financed, for which permits were issued during January, was 37 percent below the figure for December 1944 which had included over 3,000 Federally financed units. The number of privately financed dwelling units alone was 2 percent greater than in December, but about 40 percent fewer than in January 1944.

Comparison of January 1945 With January 1944

The total volume of work started in January 1945 was about 24 percent less than in January 1944. The 42-percent drop in Federal activity is in contrast with the decrease of only 14 percent in non-Federal work. Virtual completion of the Federal war building program contributed to the 55-percent drop in new residential building construction and the 20-percent drop in new nonresidential building construction from January 1944, but non-Federal activity under war-motivated industrial building programs showed a 23-percent rise.

TABLE 3.—*Value of Building Construction in All Urban Areas, by Class of Construction, January 1944 and 1945*

Class of construction	Value (in thousands of dollars)					
	Total construction			Federal construction		
	January		Percent of change	January		Percent of change
	1945	1944		1945	1944	
All construction	65,973	87,147	−24.3	18,550	31,969	−42.0
New residential	14,658	32,295	−54.6	0	6,184	(1)
New nonresidential	27,788	34,789	−20.1	15,190	24,581	−38.2
Additions, alterations, and repairs	23,527	20,063	+17.3	3,360	1,204	+179.1

[1] Percent of change not computed since no contract notifications were received for January 1945.

TABLE 4.—*Number and Value of New Dwelling Units in All Urban Areas, by Source of Funds and Type of Dwelling, January 1944 and 1945*

Source of funds and type of dwelling	Number of dwelling units			Value (in thousands of dollars)		
	January		Percent of change	January		Percent of change
	1945	1944		1945	1944	
All dwellings	5,046	11,016	−54.2	14,185	32,083	−55.8
Privately financed	5,046	8,222	−38.6	14,185	26,031	−45.5
1-family	4,095	6,257	−34.6	11,562	20,072	−42.4
2-family [1]	213	977	−78.2	580	3,074	−81.1
Multifamily [2]	738	988	−25.3	2,043	2,885	−29.2
Federal	0	2,794	(3)	0	6,052	(3)

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.
[3] Percent of change not computed since no contract notifications were received for January 1945

Construction From Public Funds, January 1945

The value of contracts awarded and force-account work started during January 1945 and January and December 1944 on all construction projects, excluding shipbuilding, financed wholly or partially from Federal funds and reported to the Bureau of Labor Statistics, is shown in table 5. This table includes construction both inside and outside the corporate limits of cities.

TABLE 5.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects [1] Financed From Federal Funds, January 1945*

Source of funds	Value (in thousands of dollars) of contracts awarded and force-account work started		
	January 1945 [2]	December 1944 [3]	January 1944 [3]
All Federal sources	48,329	56,824	138,045
War public works [4]	5,673	5,258	3,630
Regular Federal appropriations [1]	42,304	42,145	123,497
Federal Public Housing Authority	352	9,421	10,918

[1] Excludes the following amounts (in thousands of dollars) for ship construction: January 1945, 16,861; December 1944, 158,570; January 1944, 62,083.
[2] Preliminary; subject to revision.
[3] Revised.
[4] Public works financed under the Lanham Act, to provide facilities in crowded war districts.

Coverage and Method

Figures on building construction in this report cover the entire urban area of the United States which by Census definition includes all incorporated places with a 1940 population of 2,500 or more and, by special rule, a small number of unincorporated civil divisions. Valuation figures, the basis for statements concerning value, are derived from estimates of construction cost made by prospective private builders when applying for permits to build, and the value of contracts awarded by Federal and State governments. No land costs are included. Unless otherwise indicated, only building construction within the corporate limits of cities in urban areas is included in the tabulations.

Reports of building permits which were received in January 1945 for cities containing between 80 and 85 percent of the urban population of the country provide the basis for estimating the total number of buildings and dwelling units and the valuation of private urban building construction. Similar data for Federally financed urban building construction are compiled directly from notifications of construction contracts awarded, as furnished by Federal agencies.

The contracts awarded and force-account work started on Federally financed building construction inside the corporate limits of cities in urban areas were valued at $18,550,000 in January 1945, $21,649,000 in December 1944, and $31,969,000 in January 1944.

Trend of Employment, Earnings, and Hours

Summary of Reports for January 1945

TOTAL employment in nonagricultural establishments was 37,852,000 in January—1,113,000 less than a year ago. During this year period there was a net increase in the armed forces of 1½ million.

The decrease in employment between December and January, while still large, was slightly smaller this year than in earlier years. Employment in trade, which invariably declines after Christmas, decreased by 605,000, representing almost two-thirds of the over-all decline in nonagricultural employment.

Industrial and Business Employment

Wage-earner employment in the munitions manufacturing industries, which had increased from November to December for the first time in a year, was essentially unchanged between December and January. The only groups that increased significantly were chemicals and iron and steel. The increase of 8,000 in chemicals was concentrated almost entirely in the small-arms ammunition industry. An increase of 4,000 in the iron and steel group reflected the stepping up of production programs in shell loading, heavy ammunition, and guns. These increases offset decreases of 5,000 in electrical machinery, 3,000 in nonferrous metals, and small decreases in most other munitions lines.

The total number of production workers in all manufacturing industries declined by 87,000. The major share of the decline was concentrated in the nondurable-goods industries.

The largest declines in employment were reported by the food, apparel, and textile groups. The decline of 38,000 in the food group is less than the usual seasonal drop, as is the decrease of 10,000 in textiles. However, the larger than seasonal decline in the apparel group, 16,000 wage earners, reflects material shortages.

The number of bituminous-coal miners was 338,000 in January 1945, the same as in December 1944, but 32,000 less than a year ago.

TABLE 1.—*Estimated Number of Wage Earners and Indexes of Wage-Earner Employment in Manufacturing Industries, by Major Industry Group* [1]

Industry group	Estimated number of wage earners (in thousands)				Wage-earner indexes (1939=100)	
	January 1945 [2]	December 1944	November 1944	January 1944	January 1945 [2]	December 1944
All manufacturing	13,097	13,184	13,155	14,338	159.9	160.9
Durable goods	7,780	7,798	7,783	8,765	215.5	216.0
Nondurable goods	5,317	5,386	5,372	5,573	116.1	117.6
Iron and steel and their products	1,655	1,651	1,637	1,736	166.9	166.5
Electrical machinery	697	702	707	765	268.9	271.1
Machinery, except electrical	1,157	1,159	1,149	1,284	218.9	219.2
Transportation equipment, except automobiles	2,095	2,096	2,108	2,560	1319.9	1320.7
Automobiles	672	671	663	766	167.1	166.8
Nonferrous metals and their products	393	397	395	458	171.7	173.1
Lumber and timber basic products	449	452	459	487	106.7	107.6
Furniture and finished lumber products	334	340	338	361	101.7	103.6
Stone, clay, and glass products	328	330	327	348	111.6	112.3
Textile-mill products and other fiber manufactures	1,082	1,092	1,081	1,162	94.6	95.5
Apparel and other finished textile products	835	851	854	906	105.8	107.8
Leather and leather products	310	312	310	315	89.4	89.8
Food	1,016	1,054	1,074	1,021	118.9	123.3
Tobacco manufactures	84	85	84	88	89.6	90.7
Paper and allied products	308	312	308	321	116.1	117.4
Printing, publishing, and allied industries	331	335	333	338	100.9	102.3
Chemicals and allied products	629	621	607	665	218.1	215.4
Products of petroleum and coal	133	133	132	125	125.3	125.3
Rubber products	194	194	192	204	160.3	160.3
Miscellaneous industries	395	397	397	428	161.3	162.2

[1] The estimates and indexes presented in this table have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. These data are not comparable with data published in mimeographed releases dated prior to February 1945 or in issues of the Monthly Labor Review prior to March 1945. Comparable data from January 1939 are available upon request.

[2] Preliminary.

Public Employment

Employment in Federal war agencies decreased 16,000 in January 1945 within continental United States, and increased 20,000 outside the continental limits, bringing the total employment in war agencies to 2,513,000. Although employment in all other agencies in the executive branch of the Federal Government dropped 272,000 in January 1945, this was owing to the dismissal of the temporary postal employees hired to handle the Christmas mailings. If this group of temporary employees is excluded from the December figure, employment in these agencies shows very little change between December and January.

Employment in the executive branch alone was 3,359,000 in January 1945, and in all Federal services, including Government corporations, was 3,402,000.

Sources of data.—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Force-account employment is also included in construction employment (table 5), and navy yard employment is also included in employment on shipbuilding and repair projects (table 4). Data for pay rolls are now being revised and the revised series will be available next month.

TABLE 2.—*Employment in Regular Federal Services and in Government Corporations, in Selected Months*

Year and month	Total	Executive [1]	Legislative	Judicial	Government corporations [2]
January 1939	919,675	889,529	5,145	2,271	24,730
January 1940	990,514	956,423	5,535	2,268	26,288
January 1941	1,198,000	1,164,628	5,921	2,514	26,937
January 1942	1,688,719	1,649,724	6,290	2,593	30,112
January 1943	2,975,545	2,932,419	6,391	2,636	34,099
January 1944	3,268,375	3,223,028	6,133	2,665	36,549
November 1944	3,384,307	3,340,298	6,253	2,646	35,110
December 1944	3,670,914	3,627,308	6,203	2,646	34,757
January 1945 [3]	3,401,791	3,358,804	6,160	2,638	34,189

[1] Includes employees in Unites States navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5). Includes employees stationed outside continental United States.
[2] Data are for employees of the Panama Railroad Co., the Federal Reserve Banks, and banks of the Farm Credit Administration, who are paid out of operating revenues and not out of Federal appropriations. Data for other Government corporations are included under the executive service.
[3] Preliminary.

TABLE 3.—*Employment in the Executive Branch of the Federal Government by War and Other Agencies, in Selected Months* [1]

Year and month	Total	Employment					
		War agencies [2]			Other agencies		
		Total war agencies	Continental United States	Outside continental United States [3]	Total other agencies	Continental United States	Outside continental United States [3]
January 1939	889,529	190,769	165,134	25,635	698,762	690,823	7,939
January 1940	956,423	242,492	208,419	34,073	713,931	703,038	10,893
January 1941	1,164,628	407,550	348,869	58,681	757,078	741,237	15,841
January 1942	1,649,724	829,572	700,705	128,867	820,152	806,364	13,788
January 1943	2,932,419	2,118,532	1,883,897	234,635	813,887	799,151	14,736
January 1944	3,223,028	2,404,647	2,010,024	394,623	818,381	801,726	16,655
November 1944 [4]	3,340,298	2,491,848	2,045,720	446,128	848,450	832,492	15,958
December 1944 [4]	3,627,308	2,509,264	2,046,206	463,058	1,118,044	1,101,161	16,883
January 1945 [5]	3,358,804	2,513,250	2,030,351	482,899	845,554	829,327	16,227

[1] Includes employees in United States navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5).
[2] Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the emergency war agencies.
[3] Includes Alaska and the Panama Canal Zone.
[4] Data incorporate revisions in War Department employment outside continental United States.
[5] Preliminary.

Employment on Shipbuilding and Repair

During January 1945, employment at navy yards increased by 7,200, while employment at private shipyards decreased 15,700. The decreases were rather evenly distributed among the six shipbuilding regions and were great enough in each to offset the navy yard increases. The Inland region showed the greatest numerical, as well as relative, decline (2,500 or 5 percent), while the Great Lakes region ranked next with a decline of 2,100, or 4 percent.

Pay rolls in private shipyards declined relatively more than employment in January 1945, averaging $3.16 less per person than in December. Pay rolls in navy yards, on the other hand, kept pace with the increasing employment.

Over the year period, January 1944 to January 1945, total employment on shipbuilding and repair projects declined by 237,000 and pay rolls declined $20,462,000 a month. In relative terms, employment declined 14 percent and pay rolls 5 percent. Ordinarily it is difficult to interpret the movement of monthly employment and payroll data at the regional or national level, because of the variation in hours worked, amount of overtime, shift differentials, and number of weekly pay rolls included. Between January 1944 and January 1945, however, an increase in average earnings is unmistakable, and is due to the fact that the wage rates were increased in zone agreements in the Great Lakes region in May 1944 and in the Gulf region in September 1944 and to the fact that the amount of repair work has increased during the year in the Pacific and North Atlantic regions where differential rates are paid for repair work.

Data on employment and pay rolls on shipbuilding and repair projects are received monthly by the Bureau of Labor Statistics directly from all shipyards within continental United States. Employees in the navy yards are also included in data for the Federal executive service (tables 2 and 3).

TABLE 4.—*Total Employment and Pay Rolls in United States Navy Yards and Private Shipyards Within Continental United States, by Shipbuilding Region, January 1945*

Shipbuilding region	Employment (in thousands)			Pay rolls (in thousands of dollars)		
	January 1945 [1]	December 1944	January 1944	January 1945 [1]	December 1944	January 1944
All regions	1,445.9	1,454.4	1,683.2	429,245	435,358	449,707
U. S. navy yards [2]	326.5	319.3	326.0	97,390	95,255	91,605
Private shipyards	1,119.4	1,135.1	1,357.2	331,855	340,103	358,102
North Atlantic	515.7	515.9	616.0	157,616	158,742	[3]
South Atlantic	128.8	129.0	150.8	36,491	39,707	[3]
Gulf	192.2	194.6	228.8	55,929	55,666	[3]
Pacific	506.4	507.5	567.7	151,068	148,124	[3]
Great Lakes	50.6	52.7	63.8	14,002	17,108	[3]
Inland	52.2	54.7	56.1	14,139	16,011	[3]

[1] Preliminary.
[2] Includes all navy yards within continental United States constructing or repairing ships, including the Curtis Bay (Md.) Coast Guard yard.
[3] Break-down not available.

Construction Employment

Employment on new construction dropped to 650,000 in January 1945 from a total of 683,000 in the previous month and from 827,000 a year ago.

Although site employment on non-Federal projects declined 9,500 during the month of January 1945, it increased by 36,100 during the year. Employment on nonresidential building construction more than doubled during the year and employment on farm and public utility projects increased substantially. Residential building employment, on the other hand, declined 40 percent between January 1944 and January 1945.

Projects financed wholly or partially from Federal funds showed employment decreases in January 1945 totaling 16,000. These decreases, which affected all types of projects, were attributable to seasonal factors in the case of river, harbor, and flood control and reclamation projects, and mainly to completions in the case of other

types. With the closing of the program on the construction of new war plant facilities, employment on Federally financed nonresidential building projects may be expected to decline even further.

Source of data.—For construction projects financed wholly or partially from Federal funds, the Bureau of Labor Statistics receives monthly reports on employment and pay rolls at the construction site, directly from the contractors or from the Federal agency sponsoring the project. Force-account employees hired directly by the Federal Government are also included in table 2 under Federal executive service.

Estimates of employment on non-Federal construction projects (except State roads) are obtained by converting the value of work started (compiled from reports on building permits issued, priorities granted, and from certain special reports) into monthly expenditures and employment by means of factors which have been developed from special studies and adjusted to current conditions. For State roads projects, data represent estimates of the Public Roads Administration.

TABLE 5.—*Estimated Employment and Pay Rolls on Construction Within Continental United States, January 1945*

Type of project	Employment (in thousands)			Pay rolls (in thousands of dollars)		
	January 1945 [1]	December 1944	January 1944	January 1945 [1]	December 1944	January 1944
New construction, total [2]	650.4	682.6	826.8	[3]	[3]	[3]
At the construction site	536.8	562.3	662.4	[3]	[3]	[3]
Federal projects [4]	165.1	181.1	326.8	35,304	37,707	63,511
Airports	7.9	9.0	28.6	1,534	1,798	4,367
Buildings	105.6	116.6	222.9	23,619	25,056	45,108
Residential	9.7	10.8	36.4	2,017	2,218	7,528
Nonresidential [5]	95.9	105.8	186.5	21,602	22,838	37,580
Electrification	.3	.5	.5	37	58	68
Reclamation	7.3	8.1	15.7	1,760	1,829	3,392
River, harbor, and flood control	16.6	17.1	22.5	3,232	3,273	4,326
Streets and highways	9.5	9.8	12.4	1,574	1,623	2,063
Water and sewer systems	3.6	3.9	7.6	574	622	1,125
Miscellaneous	14.3	16.1	16.6	2,974	3,448	3,062
Non-Federal projects	371.7	381.2	335.6	[3]	[3]	[3]
Buildings	209.8	208.9	189.6	48,883	48,674	40,954
Residential	73.3	83.5	122.3	[3]	[3]	[3]
Nonresidential	136.5	125.4	67.3	[3]	[3]	[3]
Farm	47.0	48.6	38.1	[3]	[3]	[3]
Public utilities	84.9	90.6	78.5	[3]	[3]	[3]
Streets and highways	16.3	18.4	16.3	[3]	[3]	[3]
State	6.8	8.9	7.1	[3]	[3]	[3]
County and municipal	9.5	9.5	9.2	[3]	[3]	[3]
Miscellaneous	13.7	14.7	13.1	[3]	[3]	[3]
Other [6]	113.6	120.3	164.4	[3]	[3]	[3]
Maintenance of State roads [7]	78.0	78.8	78.3	[3]	[3]	[3]

[1] Preliminary.

[2] Data are for all construction workers (contract and force-account) engaged on new construction, additions, and alterations, and on repair work of the type usually covered by building permits. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the type usually chargeable to capital account.) The construction figure included in the Bureau's nonagricultural employment series covers only employees of construction contractors and on Federal force-account, and excludes force-account workers of State and local governments, public utilities, and private firms.

[3] Data not available.

[4] Includes the following force-account employees, hired directly by the Federal Government, and their pay rolls: January 1944, 37,044, $7,302,839; December 1944, 21,156, $4,144,262; January 1945, 19,817, $3,964,793. These employees are also included under the Federal executive service (tables 2 and 3); all other workers were employed by contractors and subcontractors.

[5] Includes the following employees and pay rolls for Defense Plant Corporation (RFC) projects: January 1944, 78,988, $18,239,112; December 1944, 15,820, $3,340,777; January 1945, 12,368, $2,787,114.

[6] Includes central office force of construction contractors, shop employees of special trades contractors, such as bench sheet-metal workers, etc., and site employees engaged on projects which, for security reasons, cannot be shown above.

[7] Data for other types of maintenance not available.

Detailed Reports for Industrial and Business Employment, December 1944

Estimates of Nonagricultural Employment

ESTIMATES of employment in nonagricultural establishments are shown in table 1. The estimates are based on reports of employers to the Bureau of Labor Statistics, on unemployment-compensation data made available by the Bureau of Employment Security of the Federal Security Agency, and on information supplied by other Government agencies, such as the Interstate Commerce Commission, Civil Service Commission, Bureau of the Census, and the Bureau of Old-Age and Survivors Insurance. The estimates include all wage and salaried workers in nonagricultural establishments but exclude military personnel, proprietors, self-employed persons, and domestic servants.

Estimates of employees in nonagricultural establishments, by States, are published each month in a detailed report on employment and pay rolls.

TABLE 1.—*Estimated Number of Employees in Nonagricultural Establishments, by Industry Division*

Industry division	Estimated number of employees (in thousands)			
	December 1944	November 1944	October 1944	December 1943
Total estimated employment [1]	38,811	38,340	38,360	40,197
Manufacturing	15,616	15,600	15,692	17,080
Mining	806	812	816	867
Contract construction and Federal force-account construction	590	629	652	829
Transportation and public utilities	3,770	3,771	3,767	3,669
Trade	7,617	7,299	7,148	7,554
Finance, service, and miscellaneous	4,292	4,315	4,340	4,127
Federal, State, and local government, excluding Federal force-account construction	6,120	5,914	5,945	6,071

[1] Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who are employed during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

Industrial and Business Employment

Monthly reports on employment and pay rolls are available for 154 manufacturing industries and for 27 nonmanufacturing industries, including water transportation and class I steam railroads. The reports for the first 2 of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on water transportation are based on estimates prepared by the Maritime Commission, and those on Class I steam railroads are compiled by the Interstate Commerce Commission.

The employment, pay-roll, hours, and earnings figures for manufacturing, mining, laundries, and cleaning and dyeing, cover wage earners only; but the figures for public utilities, brokerage, insurance, and hotels relate to all employees except corporation officers and executives, while for trade they relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover wage earners and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from about 25 percent for wholesale and retail trade, cleaning and dyeing, and insurance, to about 80 percent for public utilities and 90 percent for mining.

The general manufacturing indexes are computed from reports supplied by representative establishments in the 154 manufacturing industries surveyed. These reports cover more than 65 percent of the total wage earners in all manufacturing industries of the country and about 80 percent of the wage earners in the 154 industries covered.

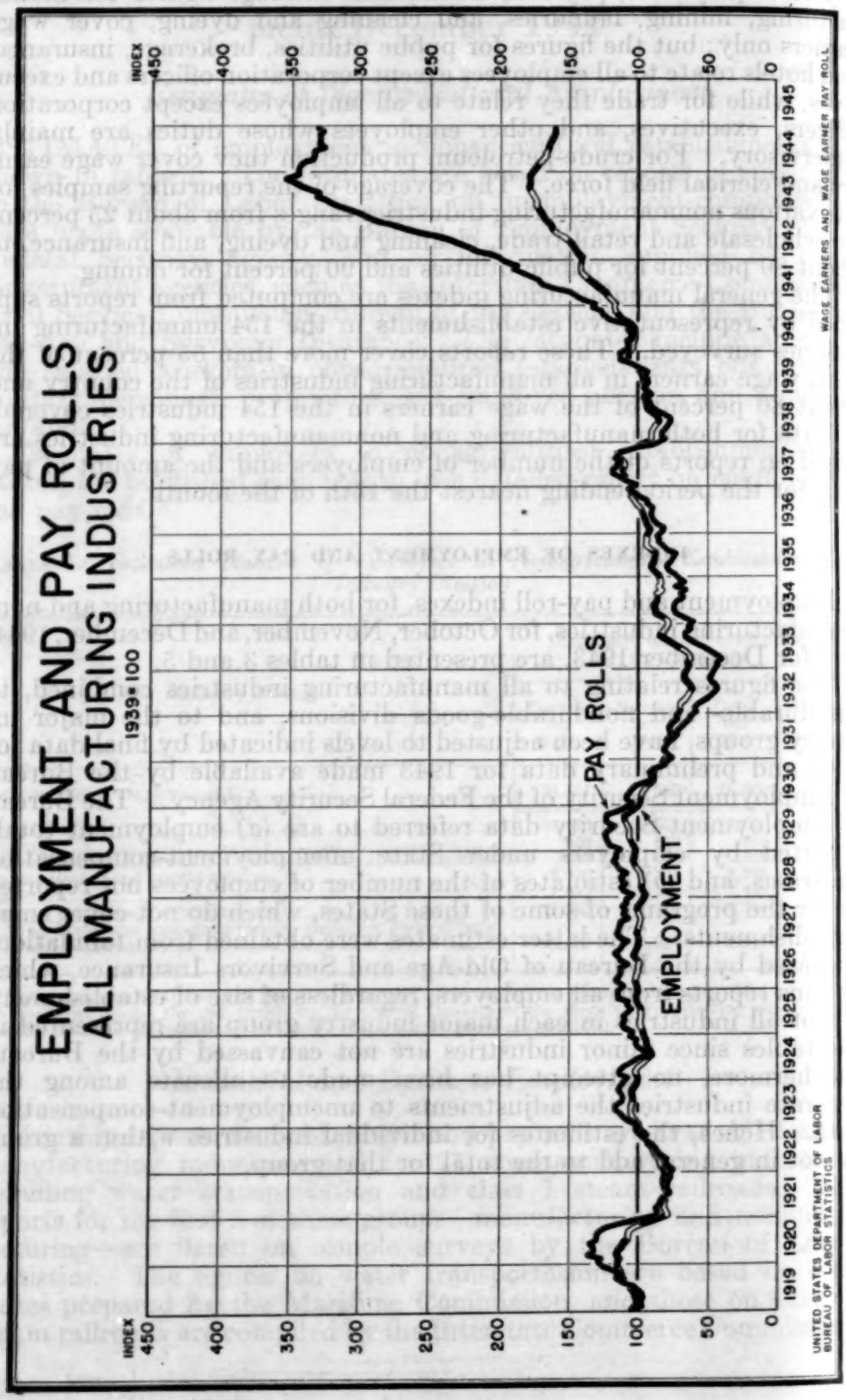
Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and the amount of pay rolls for the period ending nearest the 15th of the month.

INDEXES OF EMPLOYMENT AND PAY ROLLS

Employment and pay-roll indexes, for both manufacturing and nonmanufacturing industries, for October, November, and December, 1944, and for December 1943, are presented in tables 3 and 5.

The figures relating to all manufacturing industries combined, to the durable- and nondurable-goods divisions, and to the major industry groups, have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. The Bureau of Employment Security data referred to are (*a*) employment totals reported by employers under State unemployment-compensation programs, and (*b*) estimates of the number of employees not reported under the programs of some of these States, which do not cover small establishments. The latter estimates were obtained from tabulations prepared by the Bureau of Old-Age and Survivors Insurance, which obtains reports from all employers, regardless of size of establishment.

Not all industries in each major industry group are represented in the tables since minor industries are not canvassed by the Bureau. Furthermore, no attempt has been made to allocate among the separate industries the adjustments to unemployment-compensation data. Hence, the estimates for individual industries within a group do not in general add to the total for that group.


EMPLOYMENT AND PAY ROLLS
ALL MANUFACTURING INDUSTRIES
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PAY ROLLS
EMPLOYMENT
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UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
WAGE EARNERS AND WAGE EARNER PAY ROLL

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	December 1944	November 1944	October 1944	December 1943
All manufacturing [1]	13,184	13,155	13,250	14,559
Durable goods [1]	7,798	7,783	7,854	8,876
Nondurable goods [1]	5,386	5,372	5,396	5,683
Durable goods				
Iron and steel and their products [1]	1,651	1,637	1,646	1,749
Blast furnaces, steel works, and rolling mills	474.7	473.8	473.6	502.9
Gray-iron and semisteel castings	74.6	73.2	72.7	78.4
Malleable-iron castings	25.6	25.1	25.0	25.9
Steel castings	71.6	71.7	71.6	80.2
Cast-iron pipe and fittings	15.7	15.4	15.2	15.5
Tin cans and other tinware	39.4	38.9	40.9	33.6
Wire drawn from purchased rods	32.4	32.1	32.2	35.5
Wirework	34.6	34.7	35.5	34.4
Cutlery and edge tools	24.1	23.7	23.3	22.7
Tools (except edge tools, machine tools, files, and saws)	27.1	26.9	26.9	28.4
Hardware	46.4	45.9	45.7	47.8
Plumbers' supplies	22.1	21.8	22.1	23.4
Stoves, oil burners, and heating equipment not elsewhere classified	63.9	62.5	62.4	62.5
Steam and hot-water heating apparatus and steam fittings	55.3	54.8	54.8	60.1
Stamped and enameled ware and galvanizing	87.0	86.2	87.5	93.4
Fabricated structural and ornamental metalwork	72.6	72.3	73.4	74.4
Metal doors, sash, frames, molding, and trim	10.7	10.8	11.5	13.9
Bolts, nuts, washers, and rivets	24.1	24.6	25.2	30.0
Forgings, iron and steel	35.3	35.0	35.3	40.6
Wrought pipe, welded and heavy riveted	24.4	24.4	25.6	26.4
Screw-machine products and wood screws	42.9	42.4	42.8	49.1
Steel barrels, kegs, and drums	8.0	7.6	7.5	8.7
Firearms	36.8	38.0	41.6	66.1
Electrical machinery [1]	702	707	716	768
Electrical equipment	431.8	433.0	438.3	468.8
Radios and phonographs	119.2	121.4	123.7	130.1
Communication equipment	105.8	107.2	107.7	119.0
Machinery, except electrical [1]	1,159	1,149	1,158	1,291
Machinery and machine-shop products	449.6	445.5	449.8	499.5
Engines and turbines	67.8	67.5	67.9	70.7
Tractors	57.3	56.6	57.0	58.3
Agricultural machinery, excluding tractors	44.6	44.0	43.9	42.8
Machine tools	73.3	74.0	74.7	92.0
Machine-tool accessories	65.0	64.5	65.0	80.6
Textile machinery	27.3	27.3	27.1	29.0
Pumps and pumping equipment	73.9	73.6	74.9	82.3
Typewriters	12.6	12.3	12.0	12.6
Cash registers, adding and calculating machines	30.8	31.1	31.2	36.2
Washing machines, wringers and driers, domestic	11.7	11.4	11.9	15.0
Sewing machines, domestic and industrial	10.7	10.5	10.1	10.6
Refrigerators and refrigeration equipment [2]	52.7	51.8	52.3	58.8
Transportation equipment, except automobiles [1]	2,096	2,108	2,139	2,608
Locomotives	35.5	35.5	35.8	36.7
Cars, electric- and steam-railroad	57.6	56.5	57.5	59.6
Shipbuilding and boatbuilding	1,034.6	1,046.6	1,054.3	1,284.9
Motorcycles, bicycles, and parts	9.4	9.2	9.0	10.4
Automobiles [1]	671	663	673	774
Nonferrous metals and their products [1]	397	395	398	461
Smelting and refining, primary, of nonferrous metals	40.3	40.4	41.5	59.9
Alloying and rolling and drawing of nonferrous metals except aluminum	69.5	69.0	68.9	74.8
Clocks and watches	26.1	25.9	25.9	25.5
Jewelry (precious metals) and jewelers' findings	13.5	13.4	13.4	15.0
Silverware and plated ware	11.1	11.1	11.0	11.8
Lighting equipment	26.5	26.3	27.0	26.1
Aluminum manufactures	64.5	64.2	64.2	87.4
Sheet-metal work, not elsewhere classified	32.4	32.7	32.7	29.4
Lumber and timber basic products [1]	452	459	462	506
Sawmills and logging camps	220.5	226.1	227.3	246.2
Planing and plywood mills	70.5	69.4	69.6	79.1

See footnotes at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Con.

Industry	Estimated number of wage earners (in thousands)			
	December 1944	November 1944	October 1944	December 1943
Durable goods—Continued				
Furniture and finished lumber products [1]	340	338	337	364
Mattresses and bedsprings	17.9	18.0	17.9	18.5
Furniture	153.3	152.7	152.5	166.8
Wooden boxes, other than cigar	27.5	27.2	26.9	28.8
Caskets and other morticians' goods	11.9	12.0	12.1	12.0
Wood preserving	9.9	9.6	9.5	10.2
Wood, turned and shaped	21.7	21.5	21.3	22.8
Stone, clay, and glass products [1]	330	327	325	355
Glass and glassware	87.8	87.2	87.1	92.1
Glass products made from purchased glass	10.7	10.6	10.3	11.1
Cement	17.2	17.1	17.1	20.9
Brick, tile, and terra cotta	41.8	41.4	41.1	46.6
Pottery and related products	40.0	39.9	39.8	42.1
Gypsum	3.9	4.0	4.0	4.6
Wallboard, plaster (except gypsum), and mineral wool	9.7	9.6	9.6	10.7
Lime	7.6	7.7	7.8	9.0
Marble, granite slate, and other products	14.0	13.9	13.6	12.5
Abrasives	21.2	21.1	20.7	23.9
Asbestos products	20.4	19.9	19.7	22.0
Nondurable goods				
Textile-mill products and other fiber manufactures [1]	1,092	1,081	1,072	1,187
Cotton manufactures, except smallwares	433.7	428.8	424.1	473.2
Cotton smallwares	13.6	13.5	13.3	15.3
Silk and rayon goods	89.8	89.2	88.1	94.9
Woolen and worsted manufactures, except dyeing and finishing	148.3	146.8	146.0	160.4
Hosiery	102.4	102.0	102.0	113.2
Knitted cloth	10.4	10.2	10.3	11.6
Knitted outerwear and knitted gloves	29.4	29.2	28.7	31.7
Knitted underwear	34.6	34.4	34.2	39.4
Dyeing and finishing textiles, including woolen and worsted	60.3	59.3	59.1	65.0
Carpets and rugs, wool	20.4	20.3	20.1	20.9
Hats, fur-felt	9.5	9.4	9.3	9.9
Jute goods, except felts	3.3	3.3	3.3	3.6
Cordage and twine	15.4	15.1	15.0	16.8
Apparel and other finished textile products [1]	851	854	861	914
Men's clothing, not elsewhere classified	204.5	205.7	208.3	218.0
Shirts, collars, and nightwear	51.0	51.1	51.7	55.8
Underwear and neckwear, men's	12.1	12.2	12.2	12.6
Work shirts	14.3	14.5	14.6	17.3
Women's clothing, not elsewhere classified	216.7	217.5	218.8	229.9
Corsets and allied garments	15.1	15.0	14.9	16.3
Millinery	19.0	18.4	19.2	18.2
Handkerchiefs	2.8	2.8	2.8	3.5
Curtains, draperies, and bedspreads	12.8	13.0	13.1	16.1
Housefurnishings, other than curtains, etc	11.9	11.8	11.4	13.4
Textile bags	14.0	13.9	13.8	15.3
Leather and leather products [1]	312	310	308	319
Leather	39.6	39.2	39.3	41.1
Boot and shoe cut stock and findings	16.1	16.1	16.0	16.5
Boots and shoes	173.4	172.3	171.0	176.0
Leather gloves and mittens	12.6	12.8	12.7	13.8
Trunks and suitcases	12.9	13.1	12.7	12.4
Food [1]	1,054	1,074	1,113	1,054
Slaughtering and meat packing	155.4	149.1	147.9	170.6
Butter	20.8	21.0	21.3	19.8
Condensed and evaporated milk	13.2	13.5	13.7	12.1
Ice cream	13.7	13.9	14.5	13.4
Flour	29.3	28.9	28.4	29.7
Feeds, prepared	20.6	20.4	19.8	21.8
Cereal preparations	8.6	8.4	8.4	9.5
Baking	264.8	264.5	261.5	262.8
Sugar refining, cane	15.2	15.0	15.2	14.2
Sugar, beet	15.6	21.8	18.1	13.9
Confectionery	62.4	60.7	58.9	60.8
Beverages, nonalcoholic	26.2	26.6	27.6	26.6
Malt liquors	51.1	51.3	51.8	46.9
Canning and preserving	113.8	134.3	180.1	180.6

See footnotes at end of table.

TABLE 2.—*Estimated Number of Wage Earners in Manufacturing Industries*—Con.

Industry	Estimated number of wage earners (in thousands)			
	December 1944	November 1944	October 1944	December 1943
***Nondurable goods*—Continued**				
Tobacco manufactures [1]	85	84	83	90
Cigarettes	36.4	35.8	35.3	35.8
Cigars	34.4	34.6	34.5	39.7
Tobacco (chewing and smoking) and snuff	8.6	8.4	8.3	8.6
Paper and allied products [1]	312	308	306	324
Paper and pulp	147.2	145.0	143.9	150.0
Paper goods, other	45.6	44.8	44.4	47.5
Envelopes	9.7	9.7	9.6	10.3
Paper bags	13.3	13.2	12.9	13.1
Paper boxes	79.1	78.8	78.3	85.5
Printing, publishing, and allied industries [1]	335	333	331	342
Newspapers and periodicals	111.3	110.7	110.3	113.0
Printing, book and job	135.5	134.5	133.3	137.1
Lithographing	24.7	24.4	24.4	25.3
Bookbinding	28.4	27.8	27.6	30.4
Chemicals and allied products [1]	621	607	601	691
Paints, varnishes, and colors	30.1	29.8	29.6	29.9
Drugs, medicines, and insecticides	49.8	49.6	49.5	48.6
Perfumes and cosmetics	12.7	12.8	12.4	12.2
Soap	13.6	13.5	13.5	13.6
Rayon and allied products	54.2	53.7	53.1	53.0
Chemicals, not elsewhere classified	115.5	115.2	115.9	123.3
Explosives and safety fuses	93.5	90.3	87.7	85.7
Compressed and liquefied gases	5.9	5.6	5.8	6.2
Ammunition, small-arms	55.1	50.4	50.3	110.7
Fireworks	26.9	26.6	26.5	28.6
Cottonseed oil [2]	20.4	21.1	19.5	21.7
Fertilizers	21.5	20.0	19.0	22.1
Products of petroleum and coal [1]	133	132	132	126
Petroleum refining	90.8	90.3	90.0	82.6
Coke and byproducts	22.0	22.2	22.4	23.5
Paving materials	1.6	1.7	1.7	1.7
Roofing materials	9.6	9.6	9.6	9.8
Rubber products [1]	194	192	192	203
Rubber tires and inner tubes	93.0	92.8	92.3	93.5
Rubber boots and shoes	18.3	18.3	18.4	21.7
Rubber goods, other	71.4	70.3	70.0	76.2
Miscellaneous industries [1]	397	397	397	433
Instruments (professional and scientific), and fire-control equipment	59.0	59.2	60.7	69.4
Photographic apparatus	28.0	27.9	27.7	30.0
Optical instruments and ophthalmic goods	23.5	23.4	23.3	26.9
Pianos, organs, and parts	7.1	7.1	7.1	10.0
Games, toys, and dolls	16.8	16.9	16.9	15.4
Buttons	8.8	9.4	9.2	10.3
Fire extinguishers	5.0	5.1	5.3	7.4

[1] Estimates for the major industry groups have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. These data are not comparable with data published in mimeographed releases dated prior to February 1945 or in issues of the Monthly Labor Review prior to March 1945. Comparable data from January 1939 are available upon request. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, the sum of the individual industry estimates will not agree with totals shown for the major industry groups.

[2] Revisions have been made as follows in the data for earlier months:

Refrigerators and refrigeration equipment.—July, August, and September 1944 wage earners to 52.9, 52.9, and 52.0.

Cottonseed oil.—September 1944 wage earners to 16.3.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*

[1939 average=100]

Industry	Wage-earner employment				Wage-earner pay roll			
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943
All manufacturing [1]	160.9	160.6	161.7	177.7	331.5	327.1	330.3	345.6
Durable goods [1]	216.0	215.5	217.5	245.8	455.2	449.9	455.6	489.0
Nondurable goods [1]	117.6	117.3	117.8	124.1	210.5	207.0	207.8	205.4
Durable goods								
Iron and steel and their products [1]	166.5	165.2	166.0	176.4	316.7	308.8	313.2	319.1
Blast furnaces, steel works, and rolling mills	122.2	122.0	121.9	129.5	225.5	221.9	225.3	222.5
Gray-iron and semisteel castings	127.6	125.3	124.4	134.2	261.7	251.7	254.3	254.2
Malleable-iron castings	142.1	138.9	138.7	143.4	305.6	291.9	296.5	289.9
Steel castings	238.1	238.1	237.8	266.6	454.9	448.6	453.4	482.8
Cast-iron pipe and fittings	95.3	93.2	92.0	93.6	192.1	187.9	185.1	170.4
Tin cans and other tinware	123.9	122.4	128.6	105.8	215.6	205.4	216.5	175.1
Wire drawn from purchased rods	147.6	145.9	146.4	161.8	257.1	251.2	252.2	259.9
Wirework	113.7	114.3	117.0	113.2	235.8	229.7	235.6	221.4
Cutlery and edge tools	156.6	153.8	151.3	147.2	331.8	320.4	317.7	298.0
Tools (except edge tools, machine tools, files, and saws)	177.2	175.4	175.7	185.3	341.8	330.3	329.0	346.2
Hardware	130.3	128.9	128.1	134.2	275.9	266.4	266.5	265.7
Plumbers' supplies	89.8	88.4	89.5	95.1	168.0	161.7	165.4	166.8
Stoves, oil burners, and heating equipment not elsewhere classified	138.6	135.5	135.2	135.6	269.4	260.9	262.2	246.3
Steam and hot-water heating apparatus and steam fittings	182.6	180.8	180.7	198.4	353.6	351.0	347.4	369.2
Stamped and enameled ware and galvanizing	156.6	155.2	157.5	168.1	332.3	313.4	327.3	331.6
Fabricated structural and ornamental metalwork	204.5	203.6	206.6	209.4	400.8	396.7	400.7	396.9
Metal doors, sash, frames, molding and trim	138.7	140.0	148.3	177.9	273.8	266.7	295.6	334.5
Bolts, nuts, washers, and rivets	168.5	171.6	176.3	209.8	333.4	335.1	346.9	400.4
Forgings, iron and steel	229.5	227.7	229.9	263.6	467.3	459.2	472.7	522.6
Wrought pipe, welded and heavy riveted	292.1	291.4	306.0	310.6	583.4	568.4	627.3	564.7
Screw-machine products and wood screws	253.5	250.8	253.0	289.8	498.7	488.9	497.1	562.2
Steel barrels, kegs, and drums	132.4	125.8	123.2	142.6	267.9	246.8	244.9	288.2
Firearms	736.2	760.2	831.9	1322.9	1659.2	1758.4	1869.4	2995.9
Electrical machinery [1]	271.1	272.9	276.3	296.3	504.3	498.7	503.7	511.2
Electrical equipment	238.9	239.5	242.5	259.3	452.0	443.8	450.3	459.2
Radios and phonographs	274.1	278.9	284.3	299.0	537.3	541.7	542.3	548.0
Communication equipment	329.5	333.7	335.4	370.6	548.1	549.5	550.0	545.8
Machinery, except electrical [1]	219.2	217.5	219.2	244.4	422.0	409.0	417.4	449.5
Machinery and machine-shop products	222.2	220.2	222.3	246.9	419.4	408.4	415.5	443.0
Engines and turbines	363.2	362.1	364.1	378.7	807.6	766.4	786.6	802.1
Tractors	183.3	180.9	182.1	186.5	294.4	289.7	291.9	289.2
Agricultural machinery, excluding tractors	160.4	158.1	157.8	154.0	322.4	311.2	316.3	294.9
Machine tools	200.2	202.2	204.0	251.1	376.6	363.2	372.6	425.6
Machine-tool accessories	258.3	256.3	258.5	320.3	452.3	441.3	447.3	536.3
Textile machinery	124.8	124.4	123.6	132.2	240.9	233.3	233.4	239.0
Pumps and pumping equipment	304.7	303.8	308.9	339.5	650.2	626.5	659.4	709.2
Typewriters	77.9	75.8	73.8	77.8	153.8	154.7	152.0	159.2
Cash registers, adding and calculating machines	156.3	158.2	158.4	183.8	298.4	305.8	309.2	366.7
Washing machines, wringers and driers, domestic	156.3	153.0	158.8	201.6	298.0	268.3	283.2	347.0
Sewing machines, domestic and industrial	136.7	134.0	129.4	135.0	289.4	282.3	271.0	287.3
Refrigerators and refrigeration equipment [1]	149.9	147.3	148.7	167.2	282.0	265.6	277.0	301.8
Transportation equipment, except automobiles [1]	1320.7	1327.8	1347.8	1643.0	2893.7	2905.9	2916.1	3277.3
Locomotives	548.7	549.0	553.6	567.71	321.81	256.41	297.71	330.6
Cars, electric- and steam-railroad	234.7	230.2	234.3	243.0	510.7	467.7	486.9	476.1
Shipbuilding and boatbuilding	1494.2	1511.4	1522.5	1855.6	3424.0	3509.6	3468.7	3862.4
Motorcycles, bicycles, and parts	134.7	131.7	128.8	149.0	254.7	241.7	239.0	261.4
Automobiles [1]	166.8	164.9	167.4	192.4	308.4	304.4	307.8	341.0

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*—Continued

[1939 average=100]

Industry	Wage-earner employment				Wage-earner pay roll			
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943
Durable goods—Continued								
Nonferrous metals and their products [1]	173.1	172.1	173.6	201.2	336.2	326.9	332.2	370.6
Smelting and refining, primary, of nonferrous metals	145.9	146.3	150.4	216.9	266.8	266.8	281.4	385.2
Alloying and rolling and drawing of nonferrous metals except aluminum	179.1	177.8	177.5	192.8	344.9	333.7	335.8	349.3
Clocks and watches	128.4	127.8	127.7	125.5	280.5	272.8	268.6	243.5
Jewelry (precious metals) and jewelers' findings	93.5	92.8	92.9	104.1	168.7	159.5	157.5	163.5
Silverware and plated ware	91.2	91.4	90.9	97.4	168.3	164.6	163.7	174.7
Lighting equipment	129.6	128.3	132.0	127.7	238.6	229.4	237.3	223.1
Aluminum manufactures	274.1	272.5	272.7	371.4	512.4	497.0	501.6	659.4
Sheet-metal work, not elsewhere classified	172.8	174.2	174.6	156.8	341.0	337.8	341.0	294.5
Lumber and timber basic products [1]	107.6	109.2	109.8	120.3	193.7	199.3	212.8	210.3
Sawmills and logging camps	76.6	78.5	78.9	85.5	138.3	143.8	156.5	151.2
Planing and plywood mills	97.0	95.6	95.8	108.9	167.9	167.3	169.5	178.9
Furniture and finished lumber products [1]	103.6	103.1	102.8	110.8	194.0	190.7	193.1	192.3
Mattresses and bedsprings	97.8	98.0	97.4	100.8	180.2	174.0	175.1	164.6
Furniture	96.3	95.9	95.8	104.8	179.8	177.2	178.5	183.2
Wooden boxes, other than cigar	108.4	107.3	106.3	113.4	219.6	215.0	221.4	207.7
Caskets and other morticians' goods	95.2	96.0	97.3	96.4	169.7	163.1	170.8	157.8
Wood preserving	88.1	85.6	84.7	91.0	180.9	182.3	190.3	166.3
Wood, turned and shaped	98.8	97.9	96.8	103.7	179.1	176.6	176.2	173.5
Stone, clay, and glass products [1]	112.3	111.4	110.9	121.0	192.2	189.5	192.1	194.3
Glass and glassware	125.8	124.9	124.8	131.9	203.8	200.8	204.9	206.9
Glass products made from purchased glass	106.9	106.3	102.7	110.7	186.5	179.6	176.0	176.0
Cement	72.1	71.7	71.8	87.7	114.1	116.2	119.8	127.4
Brick, tile, and terra cotta	73.6	72.9	72.5	82.1	118.9	119.8	122.6	125.6
Pottery and related products	120.9	120.5	120.4	127.3	193.6	190.9	191.6	184.7
Gypsum	79.7	80.6	80.8	93.8	140.1	143.0	143.8	158.5
Wallboard, plaster (except gypsum), and mineral wool	119.3	118.5	117.8	132.5	217.8	217.2	218.5	228.9
Lime	80.9	81.4	82.3	95.4	156.0	157.7	170.5	171.2
Marble, granite, slate, and other products	75.4	75.1	73.5	67.3	114.2	113.9	113.4	97.7
Abrasives	273.6	272.5	267.8	309.5	490.6	473.6	464.4	487.5
Asbestos products	128.4	125.6	124.1	138.7	266.0	255.0	257.5	268.1
Nondurable goods								
Textile-mill products and other fiber manufactures [1]	95.5	94.5	93.7	103.8	176.6	172.2	170.4	175.7
Cotton manufactures, except smallwares	109.5	108.3	107.1	119.5	212.3	206.8	203.5	207.2
Cotton smallwares	102.4	101.4	100.2	114.6	190.4	180.0	182.9	196.5
Silk and rayon goods	75.0	74.4	73.6	79.2	142.3	139.4	138.5	138.7
Woolen and worsted manufactures, except dyeing and finishing	99.4	98.4	97.8	107.5	194.9	189.4	188.0	198.0
Hosiery	64.4	64.1	64.1	71.2	105.9	104.7	104.2	110.1
Knitted cloth	95.0	93.6	94.3	106.1	170.6	163.8	165.9	178.5
Knitted outerwear and knitted gloves	104.4	103.7	102.1	112.7	192.4	193.2	189.8	193.9
Knitted underwear	89.9	89.3	88.9	102.3	166.8	165.6	164.3	177.1
Dyeing and finishing textiles, including woolen and worsted	90.1	88.7	88.4	97.2	156.5	150.6	149.6	154.3
Carpets and rugs, wool	79.7	79.4	78.5	81.8	140.6	136.6	135.9	133.9
Hats, fur-felt	65.1	64.5	64.0	68.3	127.6	124.9	123.8	123.4
Jute goods, except felts	92.5	92.4	91.6	99.7	184.2	182.6	179.1	184.7
Cordage and twine	127.4	124.9	123.8	139.2	244.1	235.2	233.6	241.4
Apparel and other finished textile products [1]	107.8	108.1	109.0	115.8	191.8	192.3	196.9	183.3
Men's clothing, not elsewhere classified	93.5	94.1	95.3	99.7	164.5	169.2	169.6	156.7
Shirts, collars, and nightwear	72.3	72.5	73.3	79.2	128.0	128.7	130.9	133.8
Underwear and neckwear, men's	75.0	75.6	75.5	78.3	150.6	152.4	151.7	143.8
Work shirts	106.3	107.8	108.3	128.4	204.4	210.5	211.5	218.9
Women's clothing, not elsewhere classified	79.8	80.1	80.5	84.6	143.5	141.1	147.4	133.2
Corsets and allied garments	80.4	80.1	79.5	86.7	138.9	141.4	140.1	140.3

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*—Continued

[1939 average=100]

Industry	Wage-earner employment				Wage-earner pay roll			
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943
Nondurable goods—Continued								
Apparel and other finished textile products [1]—Continued.								
Millinery	78.0	75.5	79.2	75.1	113.2	104.6	126.8	99.7
Handkerchiefs	57.7	58.2	58.4	71.7	107.0	110.6	110.3	120.5
Curtains, draperies, and bedspreads	75.7	76.7	77.8	95.4	150.7	154.3	153.8	169.9
Housefurnishings, other than curtains, etc.	111.9	111.2	107.6	126.2	215.2	212.8	204.3	229.7
Textile bags	116.9	116.1	114.7	127.6	201.9	198.9	195.5	195.3
Leather and leather products [1]	89.8	89.4	88.8	91.8	160.8	157.4	158.0	149.7
Leather	83.8	82.9	83.1	87.0	145.5	143.3	144.0	140.6
Boot and shoe cut stock and findings	85.5	85.4	84.7	87.7	145.4	140.9	140.1	134.5
Boots and shoes	79.5	79.0	78.5	80.7	145.7	141.9	142.7	133.4
Leather gloves and mittens	125.6	127.7	126.8	137.9	209.0	222.6	223.0	223.3
Trunks and suitcases	155.3	156.8	152.4	149.4	263.1	250.9	248.3	239.3
Food [1]	123.3	125.7	130.3	123.4	205.0	203.8	207.4	194.8
Slaughtering and meat packing	129.0	123.7	122.7	141.6	227.6	211.4	200.2	238.7
Butter	115.7	117.2	118.8	110.5	181.6	180.3	187.2	164.7
Condensed and evaporated milk	136.5	138.7	141.4	124.8	217.5	216.9	229.2	185.1
Ice cream	87.1	88.8	92.3	85.1	125.8	126.5	132.3	113.5
Flour	118.3	116.8	114.6	119.7	200.4	196.6	192.3	196.4
Feeds, prepared	133.7	132.3	128.6	141.3	229.4	219.3	219.3	225.8
Cereal preparations	115.9	113.3	113.1	127.2	210.3	197.3	198.9	215.8
Baking	114.8	114.8	113.3	113.9	176.5	174.5	171.4	163.2
Sugar refining, cane	107.4	106.2	107.2	100.0	184.0	164.4	178.0	157.6
Sugar, beet	149.5	209.3	174.1	133.2	189.4	298.6	228.9	174.9
Confectionery	125.5	122.0	118.5	122.3	211.3	205.6	199.6	190.4
Beverages, nonalcoholic	123.0	125.1	129.9	125.3	162.6	166.3	171.4	156.1
Malt liquors	141.5	142.2	143.6	130.1	204.8	204.1	209.6	178.5
Canning and preserving	84.6	99.9	133.9	80.8	162.9	188.7	262.3	149.0
Tobacco manufactures [1]	90.7	90.1	89.2	96.3	177.8	172.7	165.7	161.0
Cigarettes	132.7	130.6	128.6	130.4	222.8	215.6	208.9	190.3
Cigars	67.5	68.0	67.8	78.0	147.2	144.0	137.0	143.2
Tobacco (chewing and smoking) and snuff	94.1	91.9	90.0	94.2	162.7	155.9	148.4	139.9
Paper and allied products [1]	117.4	116.0	115.1	121.9	197.6	194.0	192.9	188.8
Paper and pulp	107.1	105.5	104.7	109.1	186.0	182.0	182.6	174.6
Paper goods, other	121.1	119.0	118.1	126.2	197.8	195.1	191.9	189.5
Envelopes	111.4	111.4	110.9	119.0	178.0	171.9	171.7	172.7
Paper bags	120.3	119.1	116.7	118.2	211.6	205.8	199.3	191.2
Paper boxes	114.3	113.9	113.2	123.6	185.0	183.3	180.4	185.7
Printing, publishing, and allied industries [1]	102.3	101.4	100.8	104.3	144.1	142.2	139.5	134.7
Newspapers and periodicals	93.8	93.3	92.9	95.2	121.5	120.8	119.3	116.0
Printing, book and job	107.2	106.4	105.5	108.5	159.6	156.8	153.7	143.9
Lithographing	95.1	93.7	93.9	97.3	136.2	136.5	132.2	130.9
Bookbinding	110.1	107.7	107.1	118.0	190.0	182.3	177.9	187.7
Chemicals and allied products [1]	215.4	210.6	208.7	239.8	377.8	366.2	364.5	405.2
Paints, varnishes, and colors	106.8	106.0	105.1	106.2	170.7	167.0	167.1	159.0
Drugs, medicines, and insecticides	181.6	181.0	180.7	177.5	272.1	269.7	268.2	259.3
Perfumes and cosmetics	122.7	123.2	120.1	118.1	172.0	182.6	176.2	158.6
Soap	100.3	99.4	99.5	100.4	172.9	168.2	170.7	160.8
Rayon and allied products	112.3	111.3	110.0	109.7	180.1	179.0	176.8	167.6
Chemicals, not elsewhere classified	166.0	165.5	166.6	177.2	291.1	289.2	288.6	294.0
Explosives and safety fuses	1288.5	1244.3	1209.7	1181.6	1969.5	1865.1	1847.4	1799.6
Compressed and liquefied gases	149.8	142.6	146.1	156.5	269.2	254.2	262.1	270.6
Ammunition, small-arms	1291.8	1182.6	1178.6	2596.8	2632.5	2370.7	2402.2	4959.6
Fireworks	2321.5	2294.0	2284.4	2467.8	6406.3	6231.8	6100.1	6728.1
Cottonseed oil [2]	134.5	138.8	128.2	142.8	290.2	299.7	275.7	274.9
Fertilizers	114.4	106.5	101.5	118.0	249.8	233.6	227.2	227.3
Products of petroleum and coal [1]	125.3	125.1	125.0	118.8	220.4	219.2	224.4	197.1
Petroleum refining	124.7	124.0	123.6	113.4	214.9	214.2	219.7	186.4
Coke and byproducts	101.2	102.1	103.4	108.3	182.0	179.0	183.1	180.6
Paving materials	66.8	69.5	68.6	68.5	141.5	137.6	143.3	121.9
Roofing materials	119.5	119.7	119.4	122.3	217.5	217.6	217.4	211.5

See footnotes at end of table.

TABLE 3.—*Indexes of Wage-Earner Employment and of Wage-Earner Pay Roll in Manufacturing Industries*—Continued

[1939 average = 100]

Industry	Wage-earner employment				Wage-earner pay roll			
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943
Nondurable goods—Continued								
Rubber products [1]	160.3	159.1	158.5	167.9	303.6	289.9	290.2	288.1
Rubber tires and inner tubes	171.7	171.4	170.6	172.7	316.1	298.2	297.5	286.8
Rubber boots and shoes	123.8	123.3	124.2	146.2	228.5	219.6	225.7	245.9
Rubber goods, other	137.9	135.9	135.2	147.3	256.7	250.6	250.6	255.3
Miscellaneous industries [1]	162.2	162.4	162.4	177.1	319.7	314.5	316.0	324.5
Instruments (professional and scientific), and fire-control equipment	533.5	535.1	548.7	628.2	1058.2	1013.9	1032.1	1166.2
Photographic apparatus	161.9	161.5	160.7	174.0	258.9	271.2	268.6	273.0
Optical instruments and ophthalmic goods	202.5	201.1	200.1	231.5	346.0	346.6	341.6	369.9
Pianos, organs, and parts	92.7	93.1	92.9	131.8	170.1	177.4	174.7	244.1
Games, toys, and dolls	90.1	90.6	90.6	87.9	188.6	186.7	185.5	150.3
Buttons	79.9	85.5	83.5	93.7	163.4	166.5	168.2	173.7
Fire extinguishers	503.6	516.3	527.9	742.1	1045.9	1047.1	1076.3	1340.1

[1] Indexes for the major industry groups have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. These indexes are not comparable with those published in mimeographed releases dated prior to February 1945 or in issues of the Monthly Labor Review prior to March 1945. Comparable indexes from January 1939 are available upon request. Indexes for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data.

[2] Revisions have been made as follows in the indexes for earlier months:

Refrigerators and refrigeration equipment.—July, August, and September 1944 employment indexes to 150.4, 150.5, and 147.9; pay-roll indexes to 251.1, 276.7, and 262.9.

Cottonseed oil.—September 1944 employment index to 107.5; pay-roll index to 220.9.

TABLE 4.—*Estimated Number of Wage Earners in Selected Nonmanufacturing Industries*

Industry	Estimated number of wage earners (in thousands)			
	December 1944	November 1944	October 1944	December 1943
Mining:				
Anthracite	65.6	66.1	66.7	69.6
Bituminous coal	338	340	342	373
Metal:	69.2	69.9	70.9	90.9
Iron	23.8	24.8	25.5	29.7
Copper	22.2	22.1	22.3	30.8
Lead and zinc	14.8	14.6	14.7	18.8
Gold and silver	5.5	5.5	5.4	6.4
Miscellaneous	2.9	2.9	3.0	5.2
Telephone [1]	403	404	404	407
Telegraph [2]	45.8	45.8	46.0	46.7
Electric light and power [3]	200	201	201	205
Street railways and busses [3]	228	228	228	230
Hotels (year-round) [3]	356	356	353	352
Power laundries	243	243	244	248
Cleaning and dyeing	77.3	79.0	80.9	76.8
Class I steam railroads [4]	1,400	1,408	1,410	1,350
Water transportation [5]	144	140	135	100

[1] Data from January 1937 are available upon request. Salaried personnel are included.

[2] Data from January 1937 are available upon request. Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies. Salaried personnel are included.

[3] Data include salaried personnel.

[4] Source: Interstate Commerce Commission. Data include salaried personnel.

[5] Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries*

[1939 average=100]

Industry	Employment				Pay-roll			
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1943
Mining:								
Anthracite	79.2	79.9	80.5	84.0	148.8	137.7	159.8	156.6
Bituminous coal	91.3	91.8	92.3	100.6	199.8	197.7	210.2	231.0
Metal:	78.5	79.2	80.4	103.1	127.7	125.0	130.7	160.8
Iron	118.3	123.2	127.2	147.8	184.8	192.5	210.9	221.3
Copper	93.0	92.7	93.3	129.4	162.7	152.3	155.7	216.5
Lead and zinc	95.2	94.1	94.5	120.8	179.7	174.3	174.6	216.0
Gold and silver	22.4	22.0	22.0	25.7	29.9	28.0	29.7	33.2
Miscellaneous	73.5	72.5	74.9	130.1	122.1	119.3	125.6	205.3
Quarrying and nonmetallic	79.6	82.2	83.0	89.7	144.3	153.8	163.7	153.9
Crude-petroleum production [1]	82.1	82.1	82.7	80.9	131.7	130.9	129.6	123.8
Public utilities:								
Telephone [2]	126.7	127.1	127.1	128.2	158.6	156.9	159.0	149.3
Telegraph [2]	121.7	121.7	122.1	124.0	174.0	172.1	174.9	170.8
Electric light and power	82.0	82.1	82.1	84.1	114.5	114.2	114.3	111.9
Street railways and busses	117.7	117.7	117.7	118.7	173.5	170.1	168.3	161.4
Wholesale trade	97.1	96.8	96.0	95.9	142.3	140.0	140.4	132.2
Retail trade	111.9	103.2	99.7	112.2	146.8	134.2	132.0	135.4
Food	110.2	109.0	108.8	108.7	145.0	141.9	141.6	134.8
General merchandise	152.2	127.4	116.7	155.5	190.7	155.9	147.1	174.4
Apparel	131.3	118.4	113.5	128.2	178.9	159.5	155.0	159.7
Furniture and housefurnishings	67.5	64.4	62.6	70.2	97.0	90.1	88.7	93.9
Automotive	68.9	67.2	66.2	66.5	102.8	99.3	99.1	91.8
Lumber and building material	91.4	91.2	90.6	92.2	132.4	130.5	133.1	124.5
Hotels (year-round) [3]	110.5	110.3	109.6	109.0	169.5	164.6	161.9	149.7
Power laundries	107.8	107.6	108.0	109.9	162.3	160.7	161.3	151.8
Cleaning and dyeing	114.5	117.1	119.8	113.8	176.6	181.9	188.0	163.4
Class I steam railroads [4]	141.8	142.5	142.8	136.7	(5)	(5)	(5)	(5)
Water transportation [6]	274.5	267.7	257.2	190.8	672.9	651.9	599.0	427.1

[1] Does not include well drilling or rig building.
[2] Data from January 1937 are available upon request.
[3] Cash payments only; additional value of board, room, and tips not included.
[4] Source: Interstate Commerce Commission.
[5] Not available.
[6] Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

AVERAGE EARNINGS AND HOURS

Average weekly earnings and hours and average hourly earnings for October, November, and December 1944, where available, are given in table 6 for both manufacturing and nonmanufacturing industries. The average weekly earnings for individual industries are computed by dividing the weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As not all reporting establishments supply information on man-hours, the average hours worked per week and average hourly earnings shown in that table are necessarily based on data furnished by a slightly smaller number of reporting firms. Because of variation in the size and composition of the reporting sample, the average hours per week, average hourly earnings, and average weekly earnings shown may not be strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and hours over the period shown. The average weekly hours and hourly earnings for the manufacturing groups are weighted arithmetic means of the averages for the individual industries, estimated employment being used as weights for weekly hours and estimated aggregate hours as weights for hourly earnings.

The average weekly earnings for these groups are computed by multiplying the average weekly hours by the corresponding average hourly earnings.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

Industry group or industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944
							Cents	*Cents*	*Cents*
All manufacturing	$47.45	$46.86	$46.94	45.6	45.3	45.5	104.0	103.5	103.1
Durable goods	53.69	53.07	53.18	47.1	46.7	47.1	114.0	113.7	112.9
Nondurable goods	38.40	37.87	37.97	43.5	43.2	43.3	88.3	87.7	87.8
Durable goods									
Iron and steel and their products	51.84	50.95	51.48	47.3	46.8	47.2	109.5	108.8	109.1
Blast furnaces, steel works, and rolling mills	55.33	54.55	55.46	47.0	46.6	47.1	117.9	117.0	117.6
Gray-iron and semisteel castings	52.51	51.52	52.62	47.6	47.3	47.9	110.5	109.6	109.9
Malleable-iron castings	53.31	51.88	52.76	48.9	48.5	49.3	109.3	107.9	107.8
Steel castings	53.40	52.46	53.09	47.2	46.7	47.4	112.7	112.4	112.1
Cast-iron pipe and fittings	42.48	42.64	42.56	47.2	47.4	47.9	89.4	89.6	88.9
Tin cans and other tinware	41.03	39.61	39.74	45.3	44.3	44.5	90.5	89.4	89.3
Wirework	51.82	50.31	50.50	48.5	47.3	47.6	107.0	106.5	106.2
Cutlery and edge tools	45.09	44.31	44.52	46.5	46.1	46.3	96.9	96.1	96.1
Tools (except edge tools, machine tools, files, and saws)	46.80	45.69	45.39	47.2	46.5	46.6	99.3	98.5	97.6
Hardware	47.24	46.15	46.56	47.6	47.0	47.4	99.3	98.1	98.1
Plumbers' supplies	48.87	47.72	48.24	46.6	46.2	46.5	104.8	103.3	103.9
Stoves, oil burners, and heating equipment not elsewhere classified	48.67	48.05	48.39	47.2	46.9	47.1	103.1	102.5	102.8
Steam and hot-water heating apparatus and steam fittings	49.85	49.97	49.59	48.0	48.1	48.0	104.0	104.0	103.2
Stamped and enameled ware and galvanizing	48.98	46.66	48.22	46.8	45.1	46.2	104.6	103.5	104.4
Fabricated structural and ornamental metalwork	54.70	54.54	54.30	48.0	48.3	48.1	113.8	112.9	112.9
Metal doors, sash, frames, molding, and trim	53.48	51.62	53.99	48.6	47.0	48.5	110.2	110.0	111.3
Bolts, nuts, washers, and rivets	49.57	48.88	49.26	47.3	46.9	47.2	104.8	104.2	104.5
Forgings, iron and steel	61.36	60.57	61.76	47.9	47.5	48.2	128.1	127.4	128.2
Screw-machine products and wood screws	50.74	50.25	50.59	48.0	48.0	48.4	105.7	104.6	104.5
Steel barrels, kegs, and drums	44.04	42.68	43.05	44.8	44.1	44.6	98.3	96.8	96.4
Firearms	59.14	60.70	59.00	46.6	46.8	45.4	126.8	129.6	129.8
Electrical machinery	49.47	48.54	48.42	46.7	46.3	46.3	105.8	104.9	104.6
Electrical equipment	52.09	50.99	51.06	47.1	46.6	46.7	110.6	109.5	109.4
Radios and phonographs	42.79	42.38	41.63	46.1	46.0	45.9	92.7	92.0	90.7
Communication equipment	46.37	45.92	45.76	45.9	45.5	45.3	100.8	100.3	100.3
Machinery, except electrical	56.02	54.72	55.48	48.9	48.2	48.8	114.6	113.4	113.7
Machinery and machine-shop products	54.76	53.84	54.37	48.7	48.2	48.7	112.4	111.6	111.6
Engines and turbines	62.82	59.81	61.04	49.7	48.5	48.8	126.4	123.5	125.6
Tractors	54.24	54.09	54.11	47.3	47.3	47.1	114.7	114.4	114.8
Agricultural machinery, excluding tractors	53.35	51.98	52.97	47.1	46.0	47.0	113.2	113.0	112.8
Machine tools	61.09	58.05	58.95	52.0	50.5	51.2	117.5	115.0	115.0
Machine-tool accessories	60.35	59.51	59.83	49.4	49.2	49.3	122.3	121.2	121.7
Textile machinery	50.20	48.77	49.25	49.6	48.3	49.4	101.3	101.0	99.7
Typewriters	47.53	49.14	49.55	48.0	49.5	49.7	99.1	99.2	99.6
Cash registers, adding and calculating machines	57.77	58.48	59.08	47.8	48.2	48.8	121.6	122.2	122.0
Washing machines, wringers and driers, domestic	50.58	46.38	47.28	47.2	44.8	45.9	107.2	103.5	103.0
Sewing machines, domestic and industrial	57.10	56.88	56.53	51.5	51.4	51.1	112.2	111.7	111.6
Refrigerators and refrigeration equipment	53.42	51.21	52.90	47.1	46.0	47.0	113.5	111.2	112.5
Transportation equipment, except automobiles	63.39	63.11	62.53	48.3	47.8	48.1	131.1	132.1	130.1
Locomotives	68.36	64.94	66.52	49.6	48.3	49.4	137.7	134.4	134.7
Cars, electric- and steam-railroad	57.57	53.57	54.80	47.8	45.9	47.0	120.5	116.7	116.7
Aircraft and parts, excluding aircraft engines	56.42	55.71	55.39	47.5	47.1	47.1	119.3	118.5	117.7
Aircraft engines	61.23	59.90	60.64	46.0	45.2	46.1	132.9	132.6	131.5
Shipbuilding and boatbuilding	68.25	68.70	67.69	49.3	48.8	49.1	138.5	140.9	137.9
Motorcycles, bicycles, and parts	52.31	50.79	51.30	48.5	47.7	48.6	107.9	106.4	105.5

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry group or industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944
Durable goods—Continued									
							Cents	*Cents*	*Cents*
Automobiles	$58.45	$58.19	$57.85	45.7	45.5	45.6	127.9	128.0	127.0
Nonferrous metals and their products	50.74	49.68	49.99	47.5	47.0	47.2	106.8	105.8	105.9
Smelting and refining, primary, of nonferrous metals	48.78	48.64	49.74	46.0	46.0	46.8	105.9	105.8	106.2
Alloying and rolling and drawing of nonferrous metals except aluminum	55.42	54.09	54.53	48.8	47.9	48.2	113.5	112.9	113.1
Clocks and watches	45.82	44.61	43.89	47.8	47.1	46.8	96.0	94.9	93.9
Jewelry (precious metals) and jewelers' findings	46.94	44.72	44.09	46.4	45.5	44.7	99.7	96.8	97.2
Silverware and plated ware	48.66	47.49	47.47	47.3	46.6	46.7	102.4	101.8	101.6
Lighting equipment	47.83	46.65	46.97	45.6	44.7	45.1	104.9	104.4	104.1
Aluminum manufactures	51.47	50.25	50.65	47.4	46.9	47.2	108.7	107.2	107.4
Lumber and timber basic products	33.62	34.00	36.11	42.3	43.0	44.7	79.4	79.1	80.7
Sawmills and logging camps	32.26	32.66	35.29	41.4	42.1	44.2	77.9	77.6	79.8
Planing and plywood mills	37.99	38.39	38.76	45.3	45.9	46.5	83.7	83.6	83.4
Furniture and finished lumber products	37.43	36.91	37.48	44.5	44.3	45.0	84.2	83.3	83.3
Furniture	38.00	37.51	37.81	44.3	44.2	44.8	86.2	85.3	84.9
Caskets and other morticians' goods	41.23	39.27	40.58	46.1	44.5	45.4	89.8	88.4	89.7
Wood preserving	32.73	33.96	35.84	41.6	43.0	45.4	78.9	79.1	78.9
Stone, clay, and glass products	40.34	40.10	40.82	44.2	44.1	44.7	91.4	91.0	91.2
Glass and glassware	40.73	40.36	41.26	42.8	42.6	43.4	95.5	95.0	95.4
Glass products made from purchased glass	36.38	35.23	35.85	44.4	43.7	44.1	82.1	80.4	81.0
Cement	42.66	43.60	44.72	45.9	46.6	47.5	92.9	93.6	94.2
Brick, tile, and terra cotta	33.23	34.04	35.08	41.4	42.1	43.1	80.3	80.3	80.7
Pottery and related products	37.27	36.88	37.11	42.2	42.1	42.2	89.5	88.9	88.9
Gypsum	45.71	46.03	46.20	49.2	49.6	49.4	92.8	92.8	93.6
Lime	37.87	38.01	40.65	47.2	48.6	50.7	80.6	78.4	80.2
Marble, granite, slate, and other products	39.81	39.92	40.42	44.1	43.7	44.4	88.8	90.9	90.7
Abrasives	50.33	48.76	48.66	49.0	47.7	48.0	102.7	102.2	101.3
Asbestos products	49.47	48.49	49.53	49.2	48.5	49.2	100.3	99.9	100.7
Nondurable goods									
Textile-mill products and other fiber manufactures	30.98	30.55	30.49	42.8	42.3	42.2	72.5	72.2	72.3
Cotton manufactures, except smallwares	27.91	27.49	27.37	43.1	42.5	42.3	64.8	64.6	64.7
Cotton smallwares	34.73	33.14	34.01	43.8	42.7	43.3	79.5	77.5	78.7
Silk and rayon goods	30.41	30.04	30.20	42.9	42.5	42.7	70.8	70.7	70.6
Woolen and worsted manufactures, except dyeing and finishing	36.63	36.00	35.96	43.1	42.4	42.4	85.2	84.9	84.9
Hosiery	30.22	29.99	29.68	39.1	38.9	38.7	77.3	77.0	76.7
Knitted cloth	33.32	32.57	32.86	44.7	44.5	44.0	73.8	72.6	74.0
Knitted outerwear and knitted gloves	30.95	31.30	31.09	40.0	40.5	40.6	76.3	76.2	75.8
Knitted underwear	27.50	27.45	27.24	41.0	40.9	40.7	66.9	66.8	66.7
Dyeing and finishing textiles, including woolen and worsted	35.95	35.29	35.16	46.2	45.5	45.2	77.7	77.6	77.8
Carpets and rugs, wool	40.66	39.67	39.93	44.3	43.6	43.6	92.0	91.4	91.9
Hats, fur-felt	45.38	44.85	44.69	42.0	41.7	41.7	108.1	108.4	107.9
Jute goods, except felts	35.48	35.20	34.84	45.4	45.4	45.2	78.1	77.5	77.0
Cordage and twine	33.97	33.49	33.56	45.6	45.4	45.4	74.4	73.6	73.7
Apparel and other finished textile products	31.35	31.34	31.83	37.7	38.0	38.2	83.1	82.4	83.2
Men's clothing, not elsewhere classified	33.01	33.95	33.54	38.2	39.1	39.1	86.2	86.4	85.7
Shirts, collars, and nightwear	24.55	24.61	24.70	36.4	36.7	37.2	67.3	67.1	66.3
Underwear and neckwear, men's	26.84	26.96	27.07	37.4	37.1	37.3	72.0	73.0	72.6
Work shirts	21.21	21.58	21.50	36.6	37.4	37.4	56.8	55.8	55.5
Women's clothing, not elsewhere classified	38.45	37.67	39.12	36.7	36.4	36.9	101.7	100.1	102.7
Corsets and allied garments	29.99	30.68	30.67	40.5	41.3	41.2	74.2	74.4	74.6
Millinery	35.29	33.69	38.95	31.2	30.3	33.0	92.9	92.4	97.6
Handkerchiefs	24.19	24.83	24.66	38.3	38.1	39.0	63.3	65.2	63.3
Curtains, draperies, and bedspreads	26.81	27.11	26.65	37.0	37.7	37.4	71.4	71.2	70.2
Housefurnishings, other than curtains, etc.	33.79	33.38	33.15	42.4	42.0	41.8	79.3	79.6	79.4
Textile bags	30.17	29.95	29.72	42.3	42.5	42.0	71.6	70.8	71.1

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry group or industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944
Nondurable goods—Continued									
							Cents	*Cents*	*Cents*
Leather and leather products	$34.18	$33.69	$34.06	41.5	41.2	41.6	82.4	81.8	81.9
Leather	43.42	43.14	43.11	45.3	45.4	45.5	95.7	95.2	94.8
Boot and shoe cut stock and findings	34.59	33.39	33.51	42.8	41.9	42.4	81.4	80.6	80.3
Boots and shoes	32.55	31.87	32.29	40.9	40.4	40.9	79.4	78.7	78.9
Leather gloves and mittens	28.98	30.34	30.63	37.1	37.9	38.1	78.2	80.5	80.8
Trunks and suitcases	35.43	33.47	34.19	42.6	40.6	41.1	82.0	80.9	81.8
Food	39.82	38.88	38.39	46.0	45.3	44.8	86.6	85.9	85.7
Slaughtering and meat packing	48.16	46.81	44.68	51.9	50.3	48.2	93.5	93.3	93.0
Butter	34.96	34.39	35.22	46.6	46.5	48.4	74.5	73.4	72.7
Condensed and evaporated milk	36.34	35.66	36.96	49.0	48.3	49.9	74.5	74.1	74.4
Ice cream	39.41	38.91	39.13	46.4	46.0	46.4	82.0	81.2	81.0
Flour	42.52	42.22	42.13	48.9	49.1	49.1	86.7	86.0	85.8
Cereal preparations	46.07	44.22	44.84	47.2	46.3	46.6	97.6	95.5	95.8
Baking	39.24	38.86	38.58	46.0	45.4	45.5	85.5	85.5	84.9
Sugar refining, cane	40.89	36.94	39.62	47.8	44.2	46.0	85.9	84.0	86.4
Sugar, beet	31.83	35.84	33.01	37.6	45.2	38.8	84.7	79.3	85.1
Confectionery	31.03	31.12	31.09	41.9	42.0	42.2	74.5	74.2	73.7
Beverages, nonalcoholic	34.77	34.97	34.71	43.1	43.7	43.1	80.7	80.2	81.0
Malt liquors	51.25	50.86	51.59	45.5	44.9	45.7	112.9	113.3	113.2
Canning and preserving	31.10	30.49	31.67	40.0	39.7	40.3	78.6	77.3	79.0
Tobacco manufactures	33.24	32.46	31.53	45.0	44.1	43.3	73.8	73.6	72.8
Cigarettes	35.86	35.12	34.57	46.1	45.1	44.6	78.0	77.8	77.5
Cigars	31.13	30.29	28.89	44.1	43.2	42.2	70.7	70.2	68.7
Tobacco (chewing and smoking) and snuff	30.41	29.97	29.16	44.3	43.5	42.2	68.6	68.9	69.1
Paper and allied products	40.40	40.11	40.26	46.6	46.5	46.7	86.7	86.3	86.2
Paper and pulp	43.96	43.73	44.24	48.8	48.6	49.1	90.4	89.9	90.1
Envelopes	38.18	36.85	37.09	45.5	44.6	44.8	83.8	82.5	82.9
Paper bags	35.76	35.13	34.74	45.5	45.2	44.8	79.3	78.3	78.1
Paper boxes	35.70	35.59	35.28	44.0	44.0	43.9	81.5	81.1	80.5
Printing, publishing, and allied industries	45.96	45.53	45.06	41.5	41.3	40.9	110.8	110.3	110.2
Newspapers and periodicals	49.85	49.63	49.21	38.6	38.5	38.4	126.8	126.8	126.2
Printing, book and job	44.82	44.48	43.93	43.0	42.5	42.2	104.5	103.6	103.7
Lithographing	46.74	47.53	45.94	44.3	45.2	43.9	106.0	105.6	104.9
Chemicals and allied products	44.07	43.69	43.94	45.7	45.7	45.9	96.5	95.6	95.7
Paints, varnishes, and colors	46.93	46.03	46.48	47.5	47.2	47.5	98.6	97.8	98.0
Drugs, medicines, and insecticides	35.72	35.35	35.30	43.6	43.5	43.2	82.1	81.5	81.7
Soap	49.11	48.19	48.87	48.7	48.2	48.4	100.9	100.0	101.0
Rayon and allied products	39.08	39.20	39.11	42.7	43.1	43.0	91.6	91.0	90.9
Chemicals, not elsewhere classified	52.64	52.48	51.99	46.3	46.8	46.6	112.5	112.1	111.7
Explosives and safety fuses	46.79	45.87	46.71	45.0	45.0	46.0	104.0	101.9	101.4
Ammunition, small-arms	46.04	45.29	46.05	46.6	46.3	47.1	98.8	97.8	97.7
Cottonseed oil [2]	29.39	29.42	29.30	54.8	54.7	54.7	53.6	53.8	53.5
Fertilizers	30.48	30.83	31.56	44.2	43.7	44.3	69.0	70.5	71.2
Products of petroleum and coal	55.95	55.61	56.99	46.9	46.9	47.9	119.4	118.6	119.0
Petroleum refining	58.50	58.66	60.37	46.4	46.7	48.0	126.2	125.3	125.7
Coke and byproducts	49.31	48.08	48.51	47.5	46.6	47.1	104.0	103.1	102.9
Roofing materials	46.87	46.75	46.85	49.5	48.9	49.1	94.7	95.7	95.4
Rubber products	52.63	50.59	50.92	46.6	45.7	45.9	112.9	110.7	110.8
Rubber tires and inner tubes	61.71	58.30	58.54	47.9	46.4	46.3	129.3	125.8	126.3
Rubber boots and shoes	41.57	40.09	40.93	44.9	44.0	44.6	92.5	91.1	91.7
Rubber goods, other	43.68	43.29	43.43	45.4	45.3	45.8	95.5	95.1	95.0
Miscellaneous industries	44.98	44.40	44.53	45.6	45.5	46.0	98.5	97.5	96.8
Instruments (professional and scientific), and fire-control equipment	57.55	55.03	54.61	50.0	48.5	48.6	115.3	113.6	112.5
Pianos, organs, and parts	44.47	46.22	45.60	44.0	45.7	45.5	101.6	101.5	100.5

See footnotes at end of table.

TABLE 6.—*Earnings and Hours in Manufacturing and Nonmanufacturing Industries*—Continued

NONMANUFACTURING

Industry group or industry	Average weekly earnings [1]			Average weekly hours [1]			Average hourly earnings [1]		
	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944	Dec. 1944	Nov. 1944	Oct. 1944
Coal mining:							*Cents*	*Cents*	*Cents*
Anthracite	$48.39	$44.39	$51.08	41.5	38.6	42.6	117.6	115.6	119.7
Bituminous	50.39	49.66	52.34	43.1	42.6	44.1	118.7	117.3	119.1
Metal mining	45.98	44.52	45.75	44.7	43.8	45.0	101.9	101.4	101.5
Quarrying and nonmetallic mining [2]	39.39	40.65	42.96	44.9	46.8	48.9	88.4	87.1	88.1
Crude-petroleum production	53.97	53.90	52.92	45.4	45.9	44.9	116.2	114.6	115.6
Public utilities:									
Telephone [3]	39.74	39.19	39.66	42.7	42.3	42.9	93.5	93.0	92.8
Telegraph [4]	37.02	36.63	37.08	45.4	45.3	45.8	81.5	80.9	80.9
Electric light and power	48.63	48.89	48.90	43.2	43.4	43.1	112.6	112.0	112.7
Street railways and busses	49.71	48.68	48.02	51.8	50.8	50.2	95.5	94.6	94.5
Trade:									
Wholesale	43.55	42.91	43.57	43.3	43.0	43.2	100.2	99.6	100.8
Retail	26.41	26.20	26.94	39.8	39.4	40.4	72.8	73.6	74.1
Food	31.50	31.13	31.17	40.3	40.1	40.2	72.9	73.7	73.3
General merchandise	22.07	21.32	22.20	36.4	35.2	36.2	59.6	60.5	60.6
Apparel	28.78	28.44	28.66	36.7	36.1	37.0	78.4	79.0	78.2
Furniture and housefurnishings	39.11	38.39	38.88	43.9	44.0	44.4	88.5	88.1	88.2
Automotive	42.31	41.49	42.06	46.8	46.3	46.9	92.3	91.5	91.5
Lumber and building materials	37.40	37.07	38.25	42.9	42.6	43.6	89.1	88.2	88.9
Hotels (year-round) [5]	24.04	23.37	23.24	44.4	44.4	44.0	53.5	52.8	52.0
Power laundries	27.83	27.62	27.77	43.5	43.4	43.7	64.4	64.1	64.1
Cleaning and dyeing	31.22	31.75	31.81	43.4	43.5	43.8	74.3	74.7	74.5
Brokerage	58.58	55.76	55.10	(6)	(6)	(6)	(6)	(6)	(6)
Insurance	46.23	45.45	44.87	(6)	(6)	(6)	(6)	(6)	(6)
Private building construction	53.48	53.50	54.59	39.4	39.7	40.7	134.9	134.9	134.2

[1] These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked during any part of one pay period ending nearest the 15th of the month. As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a slightly smaller sample than are weekly earnings. Data for the current and immediately preceding months are subject to revision.

[2] Revisions have been made as follows in data published for earlier months:
Cottonseed oil.—September 1944 average weekly earnings to $27.98; average weekly hours to 53.1.
Quarrying and nonmetallic mining.—September 1944 average weekly earnings to $40.97.

[3] Data from January 1937 are available upon request.

[4] Data from June 1943 are available upon request. Excludes messengers and approximately 6,000 employees of general and divisional headquarters and of cable companies.

[5] Cash payments only; additional value of board, room, and tips, not included.

[6] Not available.

Civilian Labor Force, January 1945

THE civilian labor force declined by 290,000 persons between December 1944 and January 1945 to a total of 50,960,000, according to the Bureau of the Census sample Monthly Report on the Labor Force. Employment decreased by 450,000, while unemployment increased by 160,000 to a level of 840,000.

Seasonal declines in trade and agriculture largely accounted for the drop in civilian employment between December 1944 and January 1945. The level of employment in January 1945, however, was 230,000 below that in January 1944—a decline of 320,000 in nonagricultural employment being only partially offset by a gain of 90,000 in agriculture.

Employment of women continues each month to exceed the level reached in the same month in preceding years. In January 1945, the number of women employed was 600,000 above the January 1944 total. This is in sharp contrast to the situation among men employed in civilian jobs, whose number in January 1945 was 830,000 below

the January 1944 total. During the year, however, the size of the armed forces showed a net increase of nearly 1½ million men.

No significance can be attached to the increase in the number of unemployed persons, because similar increases have occurred in three of the last four December–January intervals.

Civilian Labor Force in the United States, Classified by Employment Status and by Sex December and January 1940–45 [1]

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over [2]									
	January 1945	December 1944	January 1944	December 1943	January 1943	December 1942	January 1942	December 1941	January 1941	December 1940
Total civilian labor force	50,960	51,250	51,430	51,900	52,720	53,630	52,970	53,680	52,350	52,740
Unemployment [3]	840	680	1,080	890	1,370	1,400	3,890	3,310	6,800	6,320
Employment	50,120	50,570	50,350	51,010	51,350	52,230	49,080	50,370	45,550	46,420
Nonagricultural	43,430	43,480	43,750	44,190	44,240	44,850	41,750	42,870	38,000	38,490
Agricultural	6,690	7,090	6,600	6,820	7,110	7,380	7,330	7,500	7,550	7,930
Males										
Civilian labor force	33,650	33,720	34,640	34,780	36,850	37,610	39,720	39,910	40,010	40,210
Unemployment [3]	490	400	650	560	810	810	2,810	2,390	5,190	4,820
Employment	33,160	33,320	33,990	34,220	36,040	36,800	36,910	37,520	34,820	35,390
Nonagricultural	27,230	27,220	27,970	28,080	29,610	30,130	29,990	30,530	27,550	27,830
Agricultural	5,930	6,100	6,020	6,140	6,430	6,670	6,920	6,990	7,270	7,560
Females										
Civilian labor force	17,310	17,530	16,790	17,120	15,870	16,020	13,250	13,770	12,340	12,530
Unemployment [3]	350	280	430	330	560	590	1,080	920	1,610	1,500
Employment	16,960	17,250	16,360	16,790	15,310	15,430	12,170	12,850	10,730	11,030
Nonagricultural	16,200	16,260	15,780	16,110	14,630	14,720	11,760	12,340	10,450	10,660
Agricultural	760	990	580	680	680	710	410	510	280	370

[1] Estimates for period prior to November 1943 revised Apr. 24, 1944.
[2] All data exclude persons in institutions.
[3] Includes persons on public emergency projects prior to July 1943.

Recent Publications of Labor Interest

March 1945

Agriculture

Reconversion of agriculture. By C. H. Woodring. Washington 5 (1013 Thirteenth Street NW.), Editorial Research Reports, 1944. 14 pp. (Vol. II, 1944, No. 17.) $1.

Reviews official statements concerning expected post-war farm surpluses in the United States and describes conditions and policies in this connection after the first World War. The subject is closely related to the problem of maintaining full employment and the demand for agricultural products.

Agrarian problems from the Baltic to the Aegean. London, Royal Institute of International Affairs, 1944. 96 pp., maps. 3s. net.

Discussion of a peasant program for Poland, Czechoslovakia, Hungary, Roumania, Yugoslavia, Bulgaria, and Greece. The program embraces greater industrialization to absorb the peasant labor surplus, as well as equitable distribution of land to the peasants, extension of the cooperative movement, and state promotion of educational and research services to the agricultural population.

What are collective farms? By V. A. Karpinsky. London, Lindsay Drummond, Ltd., 1944. 52 pp., illus. 2s.

A Soviet agricultural scientist describes the historical background, structure, functioning, and achievements of collective farms in the Soviet Union. Subjects of labor interest include mechanization of agriculture, distribution of manpower, number of skilled farm-machine operators, and remuneration of the farmers.

Child Labor and Child Welfare

Current national developments and problems in public-welfare services for children. By Katherine F. Lenroot. (In The Child, U. S. Department of Labor, Children's Bureau, Washington 25, January 1945, pp. 103–106. 5 cents, Superintendent of Documents, Washington 25.)

History and functions of the Children's Bureau, United States Department of Labor. Washington 25, U. S. Department of Labor, Children's Bureau, 1944. 23 pp.; mimeographed. Free.

Selected references on child labor and youth employment. By Floy Hendricks. Washington 25, U. S. Department of Labor, Children's Bureau, November 1944. 18 pp.; mimeographed. Free.

Young workers in the wartime labor market. (In The Child, U. S. Department of Labor, Children's Bureau, Washington 25, November 1944, pp. 72–76. Reprints of article are available free.)

Cooperative Movement

Co-op: Journal of technical assistance and information for local cooperative officers, directors, employees, and committee members, Vol. 1, No. 1, January 1945. Chicago 4 (343 S. Dearborn Street), National Cooperatives, Inc., and Cooperative League of the USA. 1 year, $2.50; 3 years, $6; single copy, 25 cents.

First issue of a new periodical which supersedes Consumers' Cooperation.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

Cooperative directions. By Murray D. Lincoln. (In Antioch Review, Vol. 4, No. 4, Yellow Springs, Ohio, winter 1944–45, pp. 607–616. 75 cents.)

This article, by the president of the Cooperative League of the USA, points out some of the tendencies he observes in the cooperative movement (farm and nonfarm) in the United States. These he treats under the heads, General directions, Operational directions, Social-political directions, and International directions.

Post-war reconstruction. A report prepared by the National Cooperative Authority for presentation to the Cooperative Congress, 1943. Manchester 4, England, Cooperative Union, Ltd., 1943. 8 pp. 3d. net.

Covers cooperative plans for reconstruction and attitudes on various aspects of the post-war problems—state control, municipal or regional control, specialized control, cooperative control, financial problems, large-scale production, and potential dangers to be faced.

Should the "earnings" or "savings" of cooperatives be taxed? (In Modern Industry, New York 17, December 15, 1944, pp. 113 et seq.)

Arguments for and against the taxation of cooperatives' net savings under the Federal income-tax law.

The cooperative movement in Britain. By Edward Topham and J. A. Hough. New York, Longmans Green & Co., 1944. 52 pp., charts, illus. (British life and thought, No. 19.) 36 cents.

Summary discussion of the various aspects of the British cooperative movement, and of its principles and organization.

Cooperative enterprise in Palestine. By Enya Harris Live. New York, Zionist Organization of America, 1937. 31 pp., charts, illus. (Zionist education series, No. 1.) 15 cents.

Concise account of cooperative development in Palestine, with statistics, showing the relationships of the various types of associations.

Economic and Social Problems

The economic status of the New York metropolitan region in 1944. New York 17, Regional Plan Association, Inc., 1944. xx, 91 pp., map, charts. $3.50.

First of a series of studies of the New York metropolitan area, comprising 22 counties surrounding the Port of New York. This volume deals with the economic structure of the region, the economic trends, and the probable size and nature of the post-war employment problem. The final section deals with the post-war employment goals in the major types of manufacturing and nonmanufacturing employments.

Economic problems of Latin America. Edited by Seymour E. Harris. New York, McGraw-Hill Book Co., Inc., 1944. 465 pp., maps, charts. $4.

Studies by 17 economists of economic issues of outstanding importance in Latin American countries, with special analyses for 10 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Haiti, Mexico, Paraguay, Venezuela).

The economic development of French Indo-China. By Charles Robequain. London, Oxford University Press, 1944. 400 pp. $4.

This volume, issued under the auspices of the International Secretariat, Institute of Pacific Relations, was prepared to show the effects of the French occupation on the economy of Indo-China and carries the account through to the outbreak of World War II. A supplement covers the period 1939–43.

The economic development of the Middle East: An outline of planned reconstruction after the war. By Alfred Bonne. Jerusalem, Jewish Agency for Palestine, Economic Research Institute, 1943. 124 pp.

Describes various factors in the basic economies of Middle East countries, the possibilities of progress through planned development, and the financing of such development.

Employment and Unemployment

Alabama post-war employment prospects. Montgomery, Alabama State Planning Board, 1944. 12 pp., chart.

Estimates are made of employment in Alabama during the first post-war year and of the contributions of the various types of economic activity to post-war employment. The study also contains recommendations, including an expansion of plans and specifications for public works and the extension of planning for post-war economic activity on a community basis throughout the State.

Impact of the war on the Elkton area, Cecil County, Maryland: Working notebook for use by local groups studying recent economic developments and formulating plans for the post-war period. Washington 25, U. S. Bureau of Labor Statistics, 1944. 23 pp., charts; mimeographed. (Industrial area study No. 16.) Free.

Wartime trends in employment [in New York State], 1940–44. (In Industrial Bulletin and Employment Review, New York State Department of Labor, Albany, August–October 1944, pp. 272–285; charts. 10 cents.)

The Philadelphia labor market in 1944. By Gladys L. Palmer. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Industrial Research Department, 1944. 30 pp., charts. 50 cents.

This report summarizes the findings of the latest of a series of annual surveys of the Philadelphia labor market. The study was designed to measure the impact of the peak year of war production on employment, unemployment, and the composition of the labor force, and to analyze the types of job changes during the war. Migration to Philadelphia during the war and the sources of the wartime labor supply are discussed. The concluding section of the report considers the significance of the findings for post-war planning.

A statistical summary of the Petersburg-Hopewell area, Virginia—Dinwiddie and Prince Georges Counties and the cities of Hopewell and Petersburg: Statistical data on war and pre-war employment and industry for use by local groups formulating plans for the post-war period. Washington 25, U. S. Bureau of Labor Statistics, 1944. 16 pp., charts; mimeographed. (Industrial area statistical summary No. 20.) Free.

The labor force during reconversion. By William Haber and Emmett Welch. (In Review of Economic Statistics, Cambridge 38, Mass., November 1944, pp. 194–205.)

Includes an account of the mobilization of manpower in the United States from July 1940 to July 1944. Estimates are made of the effects of the end of the European war on the armed forces and on employment in the major groups of industries. A concluding section deals with the possible effects of victory in the Pacific.

Full employment in British shipyards. By A. Murray Stephen. Glasgow, Institution of Engineers and Shipbuilders in Scotland, 1944. 15 pp., charts.

Cites the need for producing better ships at lower cost; for maintaining the shipbuilding and ship-repairing industry but at a reduced capacity; and for cooperative effort with full knowledge of the economic problems of the industry.

The problem of full employment—an outline for study circles. By Joan Robinson. London, S. W. 1, Workers Educational Association and Workers Educational Trade Union Committee, 1944. 31 pp. (W. E. A. study outlines, No. 10.) 4d.

Health and Industrial Hygiene

Combatting health hazards in the chemical industry. By William J. Burke. (In Chemical Industries, New York 18, September 1944, pp. 369–374, illus.; October 1944, pp. 565–568, bibliography, illus. 50 cents each.)

Experimental studies on the toxicity and potential dangers of trinitrotoluene (TNT). By W. F. von Oettingen and others. Washington 25, Federal Security Agency, Public Health Service, 1944. 78 pp., bibliographies, charts. (Public health bull. No. 285.) 15 cents, Superintendent of Documents, Washington 25.

Occupational and related dermatoses—abstracts from the literature, January 1940–June 1943, inclusive. By Louis Schwartz, M. D., and Norman R. Goldsmith, M. D. Washington 25, Federal Security Agency, Public Health Service, 1944. 179 pp. (Public health bull. No. 284.) 25 cents, Superintendent of Documents, Washington 25.

Proceedings of the sixth annual congress on industrial health, Council on Industrial Health, American Medical Association, Chicago, February 15–16, 1944. Chicago 10, American Medical Association, 1944. 63 pp. (Reprinted, with additions, from the Journal of the Association.)

In addition to the sessions in which papers on various matters connected with industrial health were presented, special sessions were devoted to symposiums on medical service under workmen's compensation, rehabilitation and reemployment of the disabled, and women in industry, respectively.

Summary report of the Ministry of Health, [Great Britain], for the year ended March 31, 1944. London, 1944. 56 pp. (Cmd. 6562.) 1s. net.

The report consists of five parts dealing, respectively, with public health, housing, war services, reconstruction, and activities in other fields such as national health insurance and public assistance. Attention is drawn to the maintenance of health in the fifth year of war.

Health protection in the U. S. S. R. By N. Propper-Grashchenkov. (In Public Affairs, Halifax, Nova Scotia, Vol. VIII, No. 1, fall 1944, pp. 43–47. 30 cents.)

Description, by the U. S. S. R. Assistant People's Commissar of Public Health, of the Soviet public health protection system, including administrative organization, services provided, and hospital facilities. Also discussed are child-welfare provisions, maternity benefits, and industrial hygiene.

Housing

The market for houses when materials and manpower are available: Third survey of consumer requirements, conducted April 17–22, 1944. Washington 25, U. S. War Production Board, Office of Civilian Requirements, Civilian Relations Division, 1944. 26 pp.; mimeographed.

A survey of 4,488 households showed that 10 percent would buy or build a new house if it were possible and stated the prices they would be willing to pay.

Second annual report of the National Housing Agency, January 1, 1943–December 31, 1943. Washington 25, 1944. Variously paged; processed.

Covers the activities of the organization and its three constituent bodies—Federal Home Loan Bank Administration, Federal Housing Administration, and Federal Public Housing Authority.

Public housing in Newark. Newark, Housing Authority of the City of Newark, 1944. 39 pp., map, illus.

Reviews the local public housing program, calls attention to the preliminary surveys of Newark's housing problems, and estimates post-war housing needs.

Rural housing: Third report of the Rural Housing Subcommittee of the Central Housing Advisory Committee, [Great Britain]. London, 1944. 67 pp. 1s. net.

Industrial Accidents and Workmen's Compensation

Work injuries in the United States during 1943. Washington 25, U. S. Bureau of Labor Statistics, 1945. 18 pp., chart. (Bull. No. 802; reprinted from Monthly Labor Review, November 1944, with additional data.) 10 cents, Superintendent of Documents, Washington 25.

Coal-mine accidents in the United States, 1942. By W. W. Adams and L. E. Geyer. Washington 25, U. S. Department of the Interior, Bureau of Mines, 1944. 140 pp. (Bull. No. 462.) 20 cents, Superintendent of Documents, Washington 25.

Manual de seguridad industrial. Mexico, D. F., Secretaría de Trabajo y Previsión Social, 1943. 80 pp., diagrams, illus.

Describes and illustrates accidents that occur most frequently in industry in general, and gives directions for their treatment and prevention.

Occupational accident prevention. By Harry H. Judson and James M. Brown. New York, John Wiley & Sons, Inc., 1944. 234 pp. $2.75.

Textbook and reference manual on industrial safety engineering, intended for foremen and other supervisory employees as well as for safety directors. The chapters are grouped under three main heads: Improvement of work procedures, Improvement of plant, and Safety activities.

Work safely, avoid personal injury: Industrial safety charts, series A, drill presses. New York 17 (205 E. 42d Street), Mill & Factory, 1945. 6 charts. 10 cents.

Planing mills and wooden containers: The control of accidents. Washington 25, U. S. Department of Labor, Division of Labor Standards, 1945. 40 pp.; mimeographed. (Industry drive No. 3.) Free.

How to cut more pulpwood safely without greater effort. Montreal, Canadian Pulp and Paper Association, 1944. 24 pp., illus. (Woodcutters handbook, Woodlands section index No. 659, B–7–a.) 25 cents.

Twenty-second annual report of the Safety in Mines Research Board, Ministry of Fuel and Power, [Great Britain], 1943. London, 1944. 30 pp. 1s. net.

How good is your workmen's compensation law?—with check list of questions. Washington 25, U. S. Department of Labor, Division of Labor Standards, 1944. 12 pp. (Bull. No. 70.) 5 cents, Superintendent of Documents, Washington 25.

Industrial Relations

Capital and labor in the railroad industry. By Howard R. Smith. (In Harvard Business Review, Vol. XXIII, No. 2, New York 18, winter 1945, pp. 144–156. $1.50.)

Deals with labor policies, particularly their relation to the post-war position of railroad transportation.

Conciliation in the shoe and leather industry. By John R. Steelman. (In Hide and Leather and Shoes, Chicago 6, August 5, 1944, pp. 22–24. 15 cents.)

Preserving industrial peace. By Howard J. Colvin. (In The Canner, Chicago 2, January 20, 1945, pp. 74–76. 15 cents.)

The two articles listed immediately above discuss the work and methods of the Conciliation Service of the U. S. Department of Labor in settling labor disputes.

Industrial relations code. By Charles J. Dexter. Burbank, Calif., Lockheed Aircraft Corporation, 1944. 95 pp.

Reference handbook on the Lockheed Aircraft Corporation's industrial-relations policies, practices, and regulations for the guidance of its management personnel.

An inquiry into labor-management relations with reference to governmental position therein. A report prepared for the Provincial Government of the Province of Manitoba. Winnipeg, King's Printer, 1943. 172 pp., bibliography.

Description of governmental machinery for the handling of industrial disputes in Great Britain, Australia, Canada, New Zealand, Sweden, and the United States.

Democracy in industry—the problem of workers' control. By John Price. London, Workers Educational Association, 1944. 55 pp. (W. E. A. study outlines, No. 11.) 6d.

Discussion of the place of workers in the control of industry, and developments in this field in Great Britain during the present war.

Industry Reports

The cotton mill worker. By Herbert J. Lahne. New York, Farrar & Rinehart, Inc., 1944. 303 pp. $3.

Account of the economic and social conditions in New England and southern mill towns since the rise of the cotton-textile manufacturing industry in the United States, with discussion of the development of trade-union organizations. The book is the fourth in the series on "Labor in twentieth century America."

The cotton textile industry of Fall River, Mass.: A study of industrial localization. By Thomas Russell Smith. New York, King's Crown Press, 1944. 175 pp., bibliography, maps, charts. $2.

The author describes the rise of Fall River as a cotton-textile center, discusses the early advantages of the location, and traces the course of interregional competition as affecting the status of the industry in Fall River. Differences in labor costs are discussed as one of the factors affecting the status of the industry and its prospects for the future.

Trends in the furniture manufacturing industry. By George L. Leffler and Mary Virginia Brown. State College, Pa., Pennsylvania State College, Bureau of Business Research, 1944. 45 pp., charts; mimeographed. (Bull. No. 18.)

A study of geographic shifts, wages as percent of value of product, and other phases of the furniture industry, with emphasis on the industry in Pennsylvania.

Labor Legislation and Court Decisions

A guide to labor legislation for supervisors and shop stewards. Washington 25, U. S. Department of Labor, Division of Labor Standards, 1944. 62 pp., loose-leaf. (Bull. No. 66–A.) 25 cents, Superintendent of Documents, Washington 25.

Summarizes functions of the Federal Department of Labor and other Federal labor agencies, basic Federal labor laws, emergency wartime labor legislation, and veterans' legislation dealing with employment and labor matters.

Reports of committees and resolutions adopted by the eleventh National Conference on Labor Legislation, [Washington], December 12–14, 1944. Washington 25, U. S. Department of Labor, Division of Labor Standards, [1945]. 34 pp.; processed. (Bull. No. 72.)

State labor and industrial inspection laws, [Missouri]. Jefferson City, Department of Labor and Industrial Inspection, February 1944. 80 pp.

Supreme Court, 1943–44—a significant term: Review and analysis of the [U. S.] Supreme Court's work and its opinions. Washington 7, Bureau of National Affairs, Inc., 1944. 94 pp. $1.

One section of the report deals with decisions of the Court concerning wages, working hours, and labor unions.

Jurisprudencia de la legislación obrera. By Manuel Martí Escasena. Habana, Cultural, S. A., 1942. 384 pp.

Decisions of Cuban courts from November 1934 to February 1942 dealing with wages and salaries, 8-hour day, rest days and vacations, maternity aid, labor unions, labor contracts, strikes, and nationalization of labor.

Labor Organizations and Their Activities

Trade-union plans for post-war reconstruction in the United States. By Julie Meyer. (In Social Research, New York 11, November 1944, pp. 491–505. 75 cents.)

American Federation of Labor and Congress of Industrial Organizations plans for the reconversion and long-run post-war period are reviewed according to the following objectives: Security of employment achieved through full employment, security through social insurance when earnings are interrupted, security of wage incomes through guaranteed earnings, and a new industrial economic structure.

The automobile unions and Negro labor. By Lloyd H. Bailer. (In Political Science Quarterly, New York 27, December 1944, pp. 548–577. $1.)

The Foreman's Association of America. By Herbert R. Northrup. (In Harvard Business Review, New York 18, Vol. XXIII, No. 2, winter 1945, pp. 187–202. $1.50.)

The author discusses the causes of the rise of foremen's unions, describes the origins of the Foreman's Association of America, and gives accounts of the status of the Association as affected by rulings of the National Labor Relations Board and the National War Labor Board. The relation of the Foreman's Association to the labor movement is also examined.

The effect on union membership of an "escape period" in renewed maintenance of membership agreements. Washington 25, U. S. Bureau of Labor Statistics, 1944. 7 pp.; mimeographed. Free.

An article giving most of the information in this report was published in the Monthly Labor Review for December 1944 (pp. 1137–1140).

The Chinese labor movement. By Nym Wales. New York, John Day Co., 1945. 235 pp., map. $2.75.

This history of the labor movement in China is divided into different stages from 1922, when the organized national movement is said to have started, to 1944, with background information and other supplementary data. There is a section on the Chinese industrial cooperative movement.

Proceedings and reports [of the General Federation of Trade Unions, Great Britain], from July 1943 to June 1944. London, 1944. Variously paged.

Covers the activities of a body created to protect the organizational rights of labor, improve the workers' status, assist in settling differences, and establish a fund for mutual assistance and support. Statistics of membership are included in the volume.

Medical Care

A cooperative program for rural medical care. By Charles M. Smith. (In Social Forces, Baltimore, Md., December 1944, pp. 187–191. $1.)

Account of the program of the U. S. Farm Security Administration for prepaid group health care among farm families, and of the special provisions for medical care of migrant farm workers.

Report of committee concerned with prepayment medical care costs insurance, [Massachusetts Medical Society]. (In New England Journal of Medicine, Boston, December 21, 1944, pp. 847–849. 25 cents.)

Interim report on the operation of the Massachusetts Medical Service for prepaid medical care. As of September 30, 1944, the Service had a net enrollment of 41,304 participants.

An industry of health, being an exposition of "Assumption B." By T. B. Layton. London, William Heinemann, Ltd., 1944. 100 pp. 3s. 6d. net.

"Assumption B" is that the people of Great Britain intend to have a "comprehensive medical service for all citizens," and the author describes the components of such a system and the reasons why it is wanted. A brief summary of the Government's White Paper on a national health service is appended.

Post-War Reconstruction

Demobilization of wartime economic controls. By John Maurice Clark. New York, McGraw-Hill Book Co., Inc., 1944. 219 pp. $1.75.

Study made for the Committee for Economic Development. The main controls analyzed relate to production, prices, and wages. The author emphasizes the need for retention of controls for a time after the war and also discusses the continuing of certain controls during peace as affected by the fact that Government "is changing from a policeman to a positive economic agency."

Post-war public works. By Philip B. Fleming, Federal Works Administrator. Washington 25, Federal Works Agency, 1944. 14 pp. 5 cents, Superintendent of Documents, Washington 25.

Excerpts from public addresses, and statements before Congressional committees, giving the views of General Fleming on a post-war construction program to provide needed public works and to help stabilize employment during reconversion of private industry from wartime to peacetime production.

Post-war public works. By Frank P. Huddle. Washington 5 (1013 Thirteenth Street NW.), Editorial Research Reports, 1944. 14 pp. (Vol. II, 1944 No. 18.) $1.

Contains an "inventory" of major types of planned post-war public-works projects in the United States and discussion of the relation between public works and the post-war problem of maintaining employment.

Annual report of the Puerto Rico Planning, Urbanizing, and Zoning Board, fiscal year 1942–43. San Juan, 1943. 29 pp., chart, maps.

Account of the membership, organization, functions, and activities of the Board, and of special studies by it. Two other reports of the Board, published in 1944, are "A development plan for Puerto Rico" (Technical paper No. 1, 66 pp., maps, charts) and a "Six-year financial program, for the fiscal years 1944–45 to 1949–50" (38 pp., mimeographed). The latter includes a list of public-service enterprises, including estimates for such projects as hydroelectric plants, housing, libraries, health and welfare, recreational facilities, and sewerage systems.

Rapports de la Commission pour l'Étude des Problèmes d'Après-Guerre (C–E–P–A–G), [Belgique], 1941–44. London, 1944. 140 pp.

Five reports, by an official commission appointed by the Belgian Government in London, covering post-war economic, labor, and other problems, with proposals for dealing with them.

China's relief needs. Washington, National Planning Association, 1945. 52 pp. (Planning pamphlets, No. 40.) 25 cents.

Analysis of China's immediate post-war needs with respect to transportation, food, clothing, fuel, shelter, etc., and the problems connected with industrial rehabilitation.

Germany after Hitler. By Paul Hagen. New York, Farrar & Rinehart, Inc., 1944. 240 pp. $2.

Among the topics discussed in this book are those pertaining to the tasks of destroying German military traditions, of reeducating German youth, and of introducing democratic processes to assure political and economic stability and security against aggression. One chapter of the book appraises the role of the German labor movement, stressing the necessity for political reorientation after the war.

Social Security

Compilation of the [Federal] social security laws, including the Social Security Act, as amended, and related enactments through July 1, 1944. Washington 25, Federal Security Agency, Social Security Board, 1944. 93 pp. 15 cents, Superintendent of Documents, Washington 25.

The price of social security. By Gertrude Williams. London, Kegan Paul, Trench, Trubner & Co., Ltd., 1944. 199 pp. 12s. 6d.

The need for labor mobility to insure social security is shown, and wartime practices in the organization of the labor market are examined as an aid in solving the post-war problem of increasing labor mobility.

Seguridad social en Cuba. By Carlos M. Raggi Ageo. Habana, Ministerio de Trabajo, 1944. 363 pp. and folded tables. (Publicaciones de la Revista Trabajo, Vol. II.)

Survey of the Cuban social-security system, including considerable detail on insurance covering old age, maternity, invalidity, accidents, occupational diseases, unemployment, sickness, and public assistance, with statistics of operation, recommendations, and a proposed law for unifying and expanding the social-security provisions.

Social insurance, including industrial injury insurance: Brief guide to the [British] Government's plan. London, Ministry of Reconstruction, 1944. 31 pp., charts. 3d. net.

Outline of proposals in White Papers on social insurance (Cmd. 6550) and industrial-injury insurance (Cmd. 6551).

An analysis of this social-security program was published in the Monthly Labor Review for December 1944 (pp. 1183–1189).

Wages and Hours of Labor

Wages of agricultural labor in the United States. By Louis J. Ducoff. Washington 25, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1944. 193 pp., charts; mimeographed.

Farms are classified by value of agricultural products and by type of product, and the status of various types of farms in respect to the employment of hired workers is analyzed in some detail. There is an extensive discussion of the various types of farm wages, including in particular the four types which are the subject of quarterly reports, namely, wages per month with and without board and per day with and without board. There is a chapter on wages as a part of the cost of agricultural production. Another chapter deals with wartime regulation of farm wage rates. The discussion of post-war agricultural wage policy suggests the desirability of an extension of public responsibility to include hired farm workers, in keeping with the principle of parity in the interest of farmers.

The distribution of private, nonagricultural employees in the United States by straight-time hourly wage rates. By David R. Roberts. (In Journal of the American Statistical Association, Washington 6, December 1944, pp. 469–478. $1.50.)

It is stated that comprehensive distribution of employees by straight-time hourly wage rates has been made possible by the recent increase in wage data on a sample basis. The article is based largely on information collected by the U. S. Bureau of Labor Statistics for use by the National War Labor Board. The study indicates that in January 1944 almost one-fifth of the private nonagricultural employees received straight-time wage rates of less than 50 cents per hour.

Salary rates of officials in 121 Oregon cities. Eugene, University of Oregon, Bureau of Municipal Research and Service, May 1944. 21 pp.; mimeographed. (Information bull. No. 58.)

Index numbers of wage rates in Canada, 1901–43. (In Labor Gazette, Department of Labor, Ottawa, October 1944, pp. 1210, 1211.)

Minimum wage fixing under the United States Fair Labor Standards Act: The working of the industry committees. By Harry Weiss. (In International Labor Review, Montreal, January 1945, pp. 17–48. Reprints of article are available at 10 cents each). Distributed in United States by Washington branch of International Labor Office.

Should the Little Steel formula be broken? (In Congressional Digest, Washington 6, February 1945, pp. 35–64. 50 cents.)

Pro and con discussion of the "Little Steel" formula (originally applied in the steel industry) for the stabilization of wage rates in the United States, with background material, the latter including data furnished by the U. S. Bureau of Labor Statistics on wartime wage stabilization in other countries.

Southern California aircraft industry: Wage stabilization plan for factory occupations; Wage stabilization plan for technical and office occupations. Los Angeles, Southern California Aircraft Industry Committee, [1943]. 2 vols., loose-leaf.

These two volumes present standard job descriptions for factory occupations and for technical and office occupations, respectively, with corresponding minimum and maximum wage-rate schedules as of March 1943, designed primarily for use in wage determinations in the southern California aircraft industry.

Wage security. By Frank P. Huddle. Washington 5 (1013 Thirteenth Street NW.), Editorial Research Reports, 1944. 12 pp. (Vol. 2, 1944, No. 15.) $1.

Review of labor's and management's arguments on a guaranteed wage in the steel industry, as presented before the National War Labor Board; operation of the Hormel, Nunn-Bush, and Minnesota State highway plans to guarantee annual employment or wages; legislation affecting such plans; and the pros and cons of applying the wage-security principle generally.

Addresses and papers on wage-incentive plans and labor-management relationship. By John W. Nickerson. Washington 25, U. S. War Production Board, Management Consultant Division, 1944. Variously paged, charts; mimeographed.

Some of the papers deal with the subject by means of formulas and charts designed to show the relationships of wages, productivity, and costs under wage-incentive plans. There is also a discussion of incentive wages for indirect workers. A paper on governmental principles for establishment of an incentive program lists 16 guiding principles suggested by the Management Consultant Division of the War Production Board.

Wage payment systems—a selected list of references. Princeton, N. J., Princeton University, Industrial Relations Section, May 1944. 25 pp.; mimeographed. (Bibliographical series No. 74.) 25 cents.

Wartime Conditions and Policies

The care of the homeless. London, Ministry of Health, 1944. 58 pp. 9d. net.
Describes the scope of the service, policies and practices, and operations in the care of the homeless in Great Britain.

The mobilization of foreign labor by Germany. (In International Labor Review, Montreal, October 1944, pp. 469–480. Reprints of article are available at 10 cents each. Distributed in United States by Washington Branch of International Labor Office.)
The information in this article, presented by country of origin of the workers, brings up to the beginning of 1944 the data published in chapter III of the International Labor Office's report (1943) on "The displacement of population in Europe."

Slave labor and deportation. New York, United Nations Information Office, 1944. 24 pp. (Conditions in occupied territories, 8.) 5 cents.
Shows the various methods used by the Germans to recruit labor in occupied countries.

General Reports

Projects and source materials in social statistics, Pacific Coast. Berkeley, Calif., Social Science Research Council, Subcommittee on Social Statistics, Pacific Coast Regional Committee, June 1944. 52 pp.
Inventory of source materials and current statistical research pertaining to California, Oregon, Washington, and British Columbia, in the fields of population, labor, health and welfare, housing, and crime and delinquency.

Ecuador—a statistical abstract. (In Commercial Pan America, Pan American Union, Washington, November-December 1944, pp. 1–23.)
Contains statistics of the number of cooperatives organized in Ecuador, 1938 to 1943; and of average pay of salaried employees and wage earners in specified employments in Government and private enterprises, 1928, 1939, and 1943.

Annual report of the Palestine Department of Labor, for 1943. Jerusalem, 1944. 16 pp. (No. 10.) 150 mils.
Presents information on the labor market, industrial disputes, wage problems, trade unions, and other matters.

Palestine between two wars. By Carl Alpert. Washington 9, Zionist Organization of America, 1944. 38 pp., map, illus. 25 cents.
Account of the economic, social, and cultural development in Palestine between 1919 and 1939.

Administration report for the year 1943 of the Industrial Adviser, Trinidad and Tobago. [Port-of-Spain], 1944. 16 pp. (Legislative Council paper No. 46, 1944.)
Subjects dealt with include population, industries, employment, industrial relations, work stoppages, trade-unions, wages and hours of labor, labor legislation, and cost of living (indexes).

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